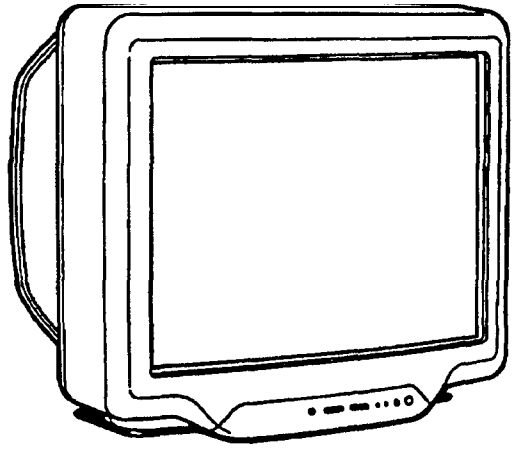
KV-27EXR95
RM-Y111

SERVICE MANUAL

US Model
Chassis No. SCC-D50K-A

Canadian Model
Chassis No. SCC-D61 E-A



ANU-2 CHASSIS

MODELS OF THE SAME SERIES	
KV-27EXR95	
KV-27EXR90	

SPECIFICATIONS

Television system American TV standards
Channel coverage VHF: 2 – 13
UHF: 14 – 69
Cable TV: 1 – 125
Picture tube Microblack™ Trinitron® tube
27-inch picture measured diagonally
28-inch picture tube measured diagonally
Antenna 75-ohm external anlenna terminal for VHF/UHF
Input VIDEO 1 and 2 IN
S VIDEO IN (4-pin mini DIN)
Y: 1 Vp-p, 75-ohms unbalanced, sync negative
C: 0.286 Vp-p (Burst signal), 75-ohms
Video (phono jacks): 1 Vp-p, 75-ohms unbalanced, sync negative
Audio (phono jacks): 500 mVrms (100% modulation)
Impedance: 47 kilohms
output VIDEO 2 OUT
Video (phono jack): 75-ohms unbalanced, sync negative
Audio (phono jacks):
Impedance: 10 kilohms
AUDIO OUT (VARIABLE) (phono jacks)
More than 408 mVrms at the maximum volume setting (variable)
Impedance: 5 kilohms

Speaker output 5 W × 2
Power requirements 120 V AC, 60 Hz
Power consumption Maximum: 165 W
Standby: 1.5 W
Dimensions (h/w/d) 595 × 683 × 573.5 mm (23⅝ × 27 × 22⅝ inch)
Supplied accessories
Remote Commander RM-Y111 (1) with 2 size AA (R6) EVEREADY batteries
Terminal cover (1)
Recommended accessories
U/V mixer EAC-66
Connecting cable VMC-810/820S, YC-15V/30V
SPEAKER SIZE TWEETER 50mm X2 (2")
WOOFER 85mm X2 (3 3/8")
TOTAL 2 SPEAKER BOXES
INTERNAL AUDIO POWER
FRONT 5 WATTS X 2
CONDITION 8 ohms, 10% T.H.D
AUDIO FREQUENCY RESPONSE
TWEETER 2kHz – 20kHz
WOOFER 50Hz -2kHz
CONDITION BASS/TREBLE ARE IN NORMAL CONDITION

Design and specifications are subject to change without notice.

MICROFILM

TRINITRON® COLOR TV
SONY®

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WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ ii L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLEMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

SAFETY CHECK-OUT

(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors,
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you **have** replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any).
   Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low **HV.**
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must **not** exceed 0.5 **mA** (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot **side** of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

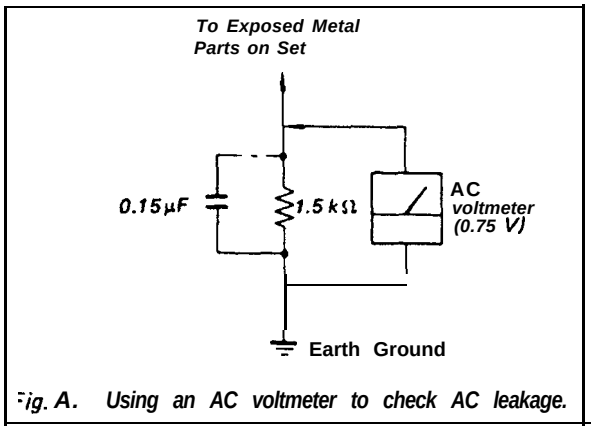


Fig. A. Using an AC voltmeter to check AC leakage.

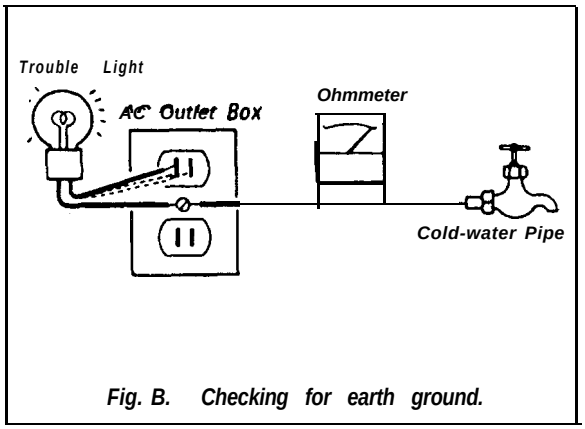
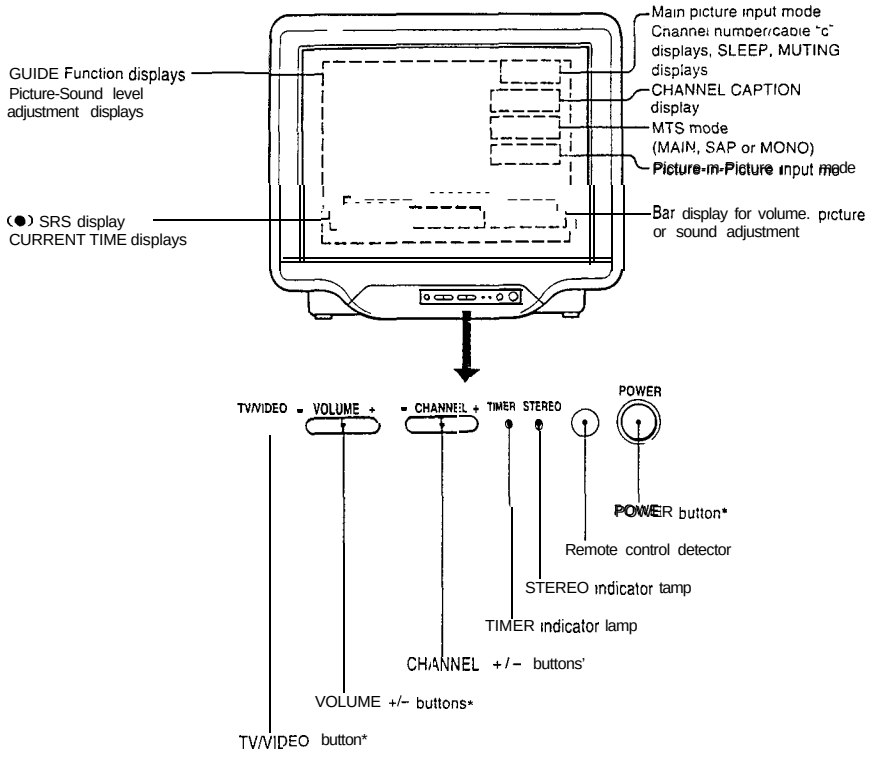


Fig. B. Checking for earth ground.

SECTION 1
GENERAL

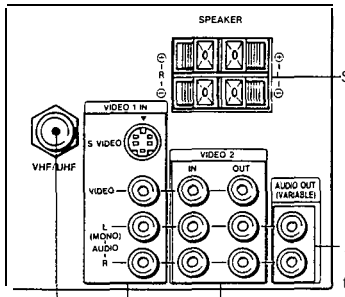
1-1. LOCATION OF CONTROLS

Front panel



*Buttons with the same function are also located on the Remote Commander

Rear panel



SPEAKER terminals

AUDIO OUT (VARIABLE) tacks

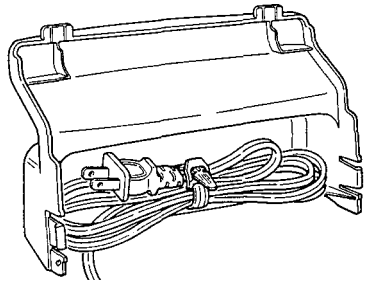
VIDEO 2 IN and OUT jacks

VIDEO 1 IN jacks (S VIDEO, VIDEO/AUDIO)

VHF/UHF antenna terminal

Storing the AC power cord 1

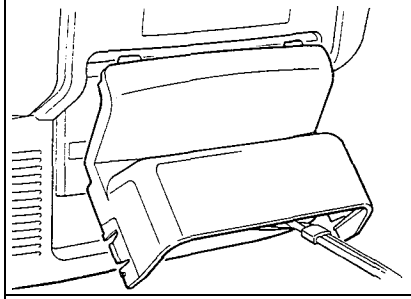
You can store the AC power cord at the rear of the termmal cover, as illustrated here.



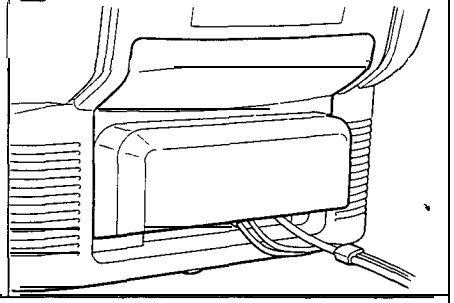
Attaching the termmal cover

The terminal cover comes packed separately from the TV. First connect any optional equipment you want to use with your TV, then attach the cover as shown below.

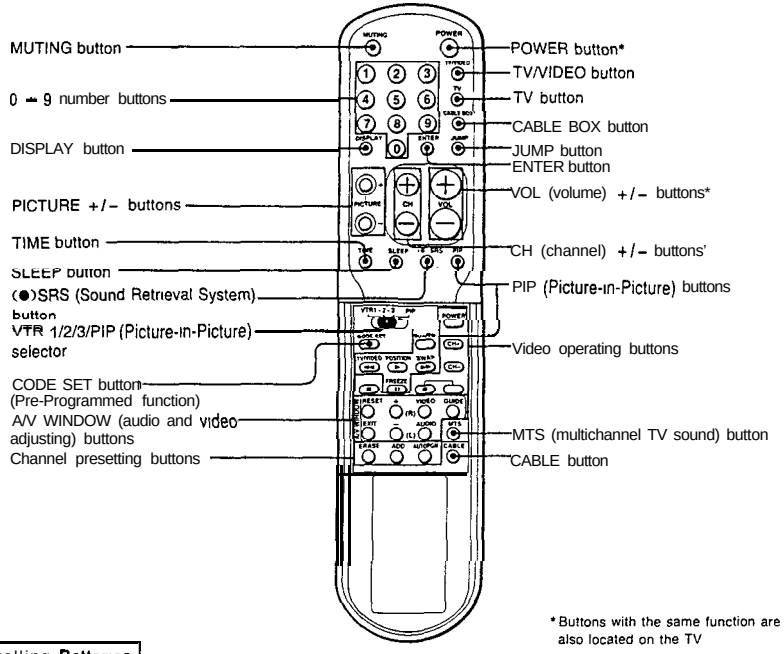
1 Insert the two tabs at the top of the termmal cover into the rear panel as shown below.



2 Push the cover onto the rear panel so that the connected cords extend out from the opening at the bottom.



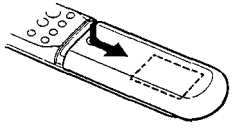
To remove the terminal cover
Pull the cover away from the rear panel to the angle shown in step 1. then pull down to release the cover from the rear panel.



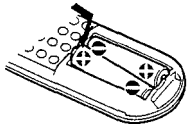
* Buttons with the same function are also located on the TV

Installing Batteries

1 Remove the battery compartment cover.



2 Insert two size AA (R6) batteries in correct polarity.

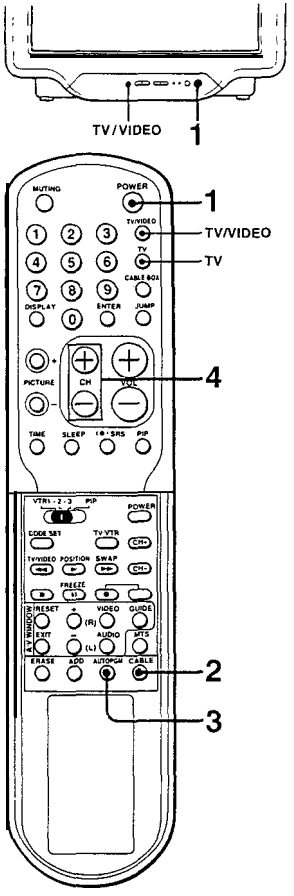


Battery life
With normal operation, batteries will last up to hall a year. If the Remote Commander does not operate properly, the batteries might be exhausted. Replace both with new ones.

To avoid damage from possible battery leakage
Remove the batteries when the Remote Commander will not be used for a long time.

1-2. PRESETTING TV CHANNELS

VHF channels (2 – 13) have been preset on your TV. You can watch those TV channels without further preparation by following the steps under "Watching TV Programs" on p.12. For UHF and cable channels. you must first preset channels to your TV



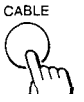
If you have previously pressed the CABLE BOX button, the Remote Commander is set to control the cable converter box. not the TV. Press the TV button in order to control the TV with the Remote Commander.

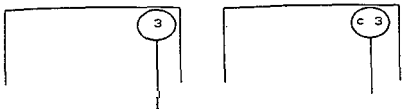
1 Press POWER on the TV or the Remote Commander to turn the TV on

POWER

2 Press CABLE so that a channel number appears in the mode that you want to preset. TV or cable.

CABLE





To preset VHF or UHF channels To preset cable TV channels

If "VIDEO 1" or "VIDEO 2" is displayed on the screen, press the TV/VIDEO button on the TV or on the Remote Commander so that a channel number appears. Each time you press TV/VIDEO, the display will change as follows:

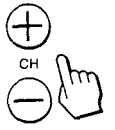
TV channel number → VIDEO 1 → VIDEO 2

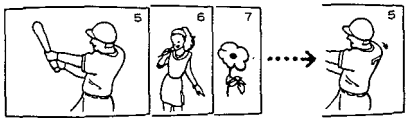
3 Press AUTO PGM.

AUTO PGM

"AUTO PROGRAM" is displayed on the screen and receivable channels (other than the channels already preset) will be preset in numerical sequence. The channels previously preset remain in the TV's memory. When no more channels can be found, the programming stops and the lowest numbered channel is displayed.

4 Press CH+/– to check or view preset channels.

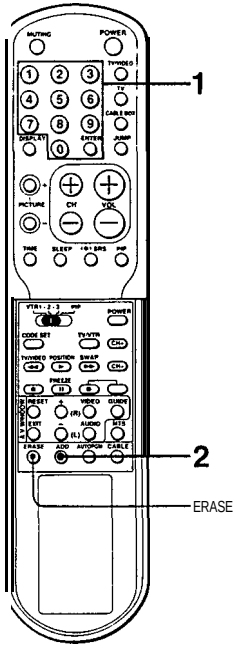




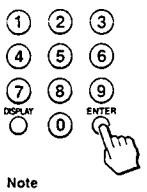
Channels that can be received on this TV:
VHF. 2 – 13 UHF 14 -69 Cable: 1 – 125

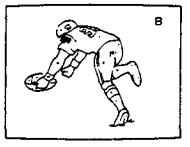
To add channels that could not be preset automatically because their signal strength was too weak, or to erase unnecessary channels, follow the steps in "Presetting Desired Channels or Erasing unnecessary Channels" on the next page.

Presetting Desired Channels or Erasing Unnecessary Channels



1 Press the 0 – 9 "umber button(s) and the" press ENTER to select the channel you want to add or erase.





Note
When you erase channels, you can also use CH +/– to select the channel.

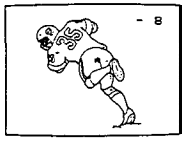
2 To add channels
Press ADD.

ADD

A "+" appears before the number for a moment.
This channel has now been added to the channel scan memory.

To erase channels
Press ERASE.

ERASE



A "–" appears before the number for a moment.
This channel has now been erased from the channel scan memory.
The next time you press the CH +/– button, this channel will be skipped.

Repeat steps 1 and 2 to add or erase other channels.

CAUTION
When a VHF or UHF channel is erased
The cable TV channel with the same number is also erased, and vice versa.

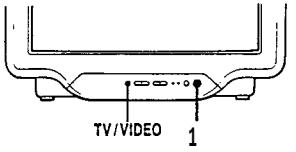
Cable TV channel chart*
Cable TV systems use letters or numbers to designate channels. To tune in a channel. refer to the chart below.

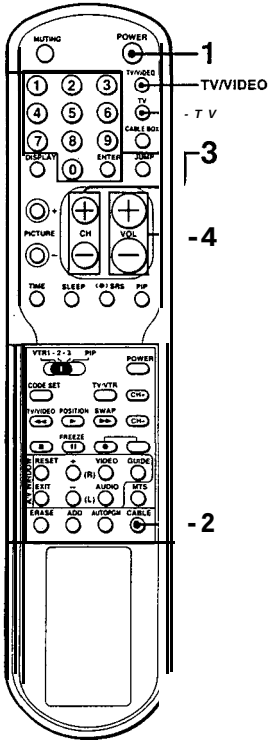
Number on this TV	1	5	6	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Corresponding CATV channel	A-8	A-7	A-6	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
31	32	33	34	35	36	37	38	39	.....	93	94	95	96	97	98	99	100	101	102	.....	123	124	125
R	S	T	U	V	W	W+1	W+2	W+3	.....	W+57	W+58	A-5	A-4	A-3	A-2	A-1	W+59	W+60	W+61	.....	W+82	W+83	W+84

Check with your local cable TV company for more complete information on the available channels.

*This designation of cable TV channels conforms to the EIA/NCTA recommendation.

1-3. WATCHING TV PROGRAMS





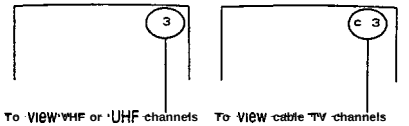
If you have previously pressed the CABLE BOX button. the Remote Commander is set to control the cable converter box, not the TV. Press the TV button in order to control the TV with the Remote Commander.

1 Press POWER on the TV or the Remote Commander to turn the TV on.

POWER

2 Press CABLE so that the desired mode (au or cable signal) appears

CABLE

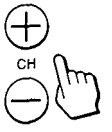


If "VIDEO 1" or "VIDEO 2" is displayed on the screen, press the TV/VIDEO button on the TV or on the Remote Commander so that a channel number appears.
Each time you press TV/VIDEO, the display will change as follows:

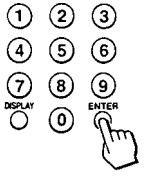
TV channel number → VIDEO 1 → VIDEO 2

3 Select a channel in one of the following two ways:

To scan the preset channels* in numerical sequence. press CH +/–

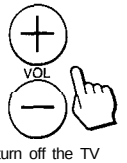


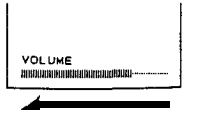
To select a channel directly. press the 0 – 9 number button(s) and the" ENTER.
For example, to select channel to. press 1, 0 and ENTER.



* For more on presetting channels see pp. 10 – 11.

4 Press VOL + or – to adjust the volume.





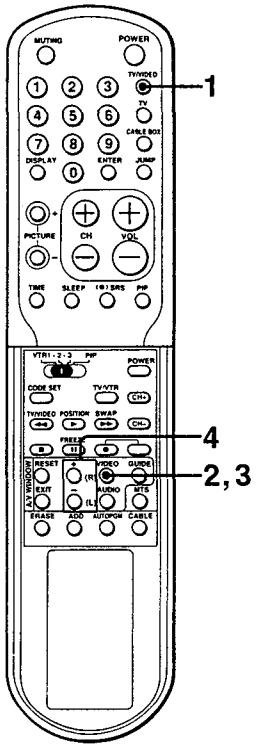
Press + to increase volume.
Press – to decrease volume

To turn off the TV
Press POWER on the TV or the Remote Commander again.

When you want to watch the connected VCR
Press TV/VIDEO until "VIDEO 1" or "VIDEO 2" appears on the screen. To return to the TV, press TV/VIDEO until the channel number appears on the screen.

14. ADJUSTING PICTURE AND SOUND LEVELS

You can set different picture and sound quality levels for each input mode by changing the input mode (TVNIDEO) before setting. These settings will be retained even when you turn the TV off.

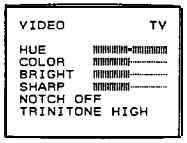


1 Select the input mode you want to adjust with the TV/VIDEO button

TVNIDEO

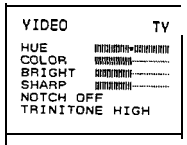
2 Press VIDEO.
The VIDEO menu appear* *on the* screen.

VIDEO

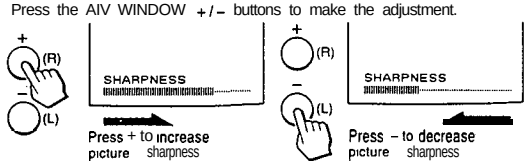


3 Press VIDEO repeatedly until the item you want to adjust turns red

VIDEO

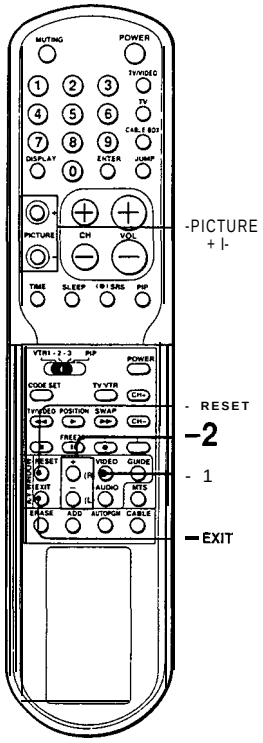


4 Press the AIV WINDOW +/– buttons to make the adjustment.



Picture quality	Press – (L) button	Press + (R) button
HUE	Skin tones become purplish	Skin tones become greenish
COLOR	For less color Intensity	For more color intensity
BRIGHT	For less brightness	For more brightness
SHARP	For less sharpness	For more sharpness

The display will disappear automatically after a few seconds.

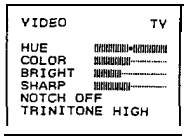


Choosing the NOTCH filter setting

Under normal conditions, set NOTCH OFF
If dots or stripes appear while you are watching an image from a computer, computer game software or video source, set to NOTCH ON.

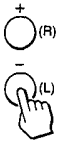
1 Press VIDEO.
Press VIDEO repeatedly until the NOTCH setting turns red

VIDEO



2 Press the AN WINDOW +/– buttons to select ON or OFF
Press + to select ON.

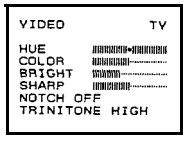
Press-to select OFF



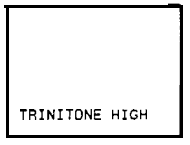
Making the TRINITONE adjustment

Color picture tubes are usually manufactured with a fixed color temperature (tint) that determines the "warmth" (red tint) or "coolness" (blue tine) of the picture. With Sony's Trinitone feature, you can adjust the picture color to your preference.

1 Press VIDEO.
Press VIDEO repeatedly until the TRINITONE setting turns red.

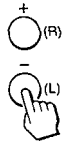


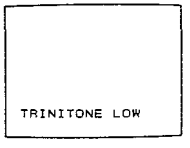
2 Press the AN WINDOW +/– buttons to select HIGH or LOW.
Press + to select HIGH.



The factory preset whiteness will be restored

Press – to select LOW.

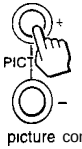




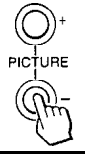
A touch of red will be added to the white areas

Adjusting the Picture Contrast

Press + to increase picture contrast with vivid color.



Press-to decrease picture contrast with soft color.

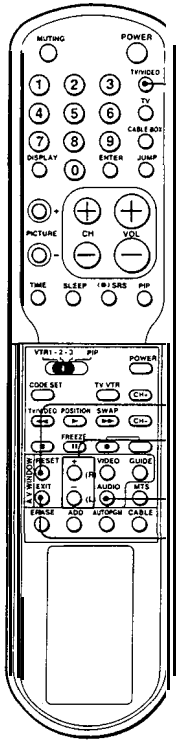


To restore the factory settings
Press RESET while in the VIDEO menu screen.
The settings will return to factory-set condition, as shown below.

The display will disappear after a few seconds, if you do not press any other buttons.

Note
The picture contrast level, *NOTCH* and TRINITONE settings cannot be stored under each input mode (p. 13).

To restore the normal picture
Press EXIT.



--TV/VIDEO

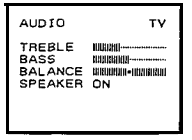
--RESET

-AN WINDOW +/–

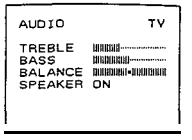
·AUDIO

1 Select the input mode you want to adjust with the TV/VIDEO button.

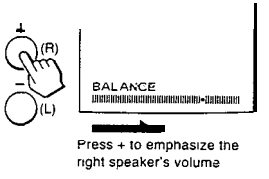
2 Press AUDIO.
The *AUDIO* menu appears on the screen



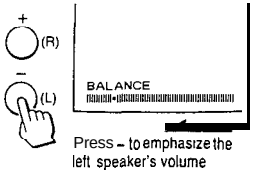
3 Press AUDIO repeatedly until the item you want to adjust turns red.



4 Press the A/V WINDOW +/– buttons to make the adjustment.



Press + to emphasize the right speaker's volume



Press – to emphasize the left speaker's volume

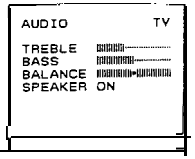
Sound quality	Press – (L) button	Press + (R) button
TREBLE	To decrease treble response	To increase treble response
BASS	To decrease bass response	To increase bass response
BALANCE	To emphasize the left speaker's volume	To emphasize the right speaker's volume

The displays will disappear automatically after a few seconds.

Turning SPEAKER ON/OFF

1 Press AUDIO.
Press AUDIO repeatedly until the SPEAKER setting turns red.

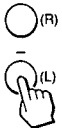
AUDIO

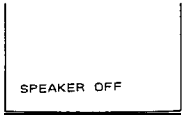


2 Press the AN WINDOW +/– buttons to select ON or OFF
Press + to turn on the speakers connected to the SPEAKER terminals.

SPEAKER ON

Press-to turn the above speakers off, in order to use an audio system connected to the AUDIO OUT (VARIABLE) jacks.

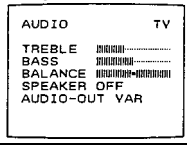




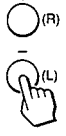
Selecting AUDIO-OUT FIX mode.

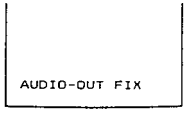
1 Press AUDIO.
Make sure that the SPEAKER OFF setting is selected (see above).
Press AUDIO repeatedly until the AUDIO-OUT setting turns red.

AUDIO



2 Press the A/V WINDOW +/– buttons to select FIX or VAR.
Press-to select FIX.





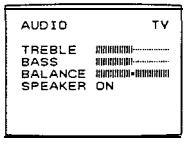
VOLUME is set to maximum, and TREBLE, BASS and BALANCE are set to center levels. You can only make adjustments with the external equipment controls.

In AUDIO-OUT "AR (VARIABLE, mode, you can adjust the audio qualities with the TV controls.

To change to AUDIO-OUT VAR mode
Press +.

Note
When you turn SPEAKER from OFF to ON, AUDIO-OUT FIX mode switches automatically to AUDIO-OUT "AR mode. and VOLUME. TREBLE. BASS and BALANCE settings prior to AUDIO-OUT *FIX* settings *are restored.*

To restore the factory settings
Press RESET while in the AUDIO menu screen.
The factory-set condition will be restored, a shown below.

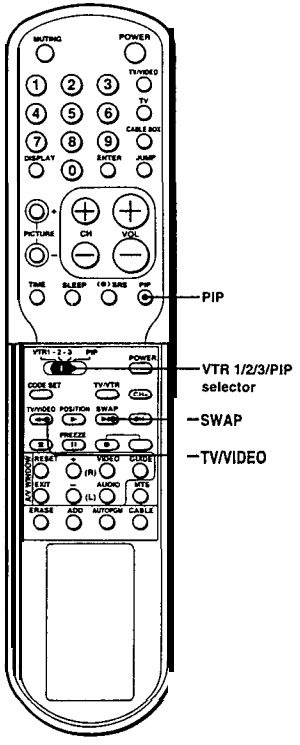


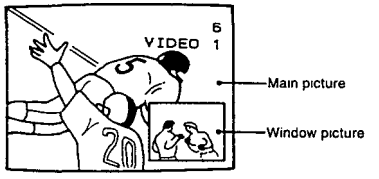
The display will disappear after approximately 3 seconds, if you do not press any other buttons.

To restore the normal picture
Press EXIT.

1-5. USING PICTURE-IN-PICTURE

With the Picture-In-Picture function, you can watch both the main picture and a second (window) picture at the same time.
In order to enjoy this function, **first connect your video equipment (VCR, video disc player, etc.) to the TV. Then you can watch two TV programs, or** a TV program and a video source at the same time.
For instructions on connecting video equipment.

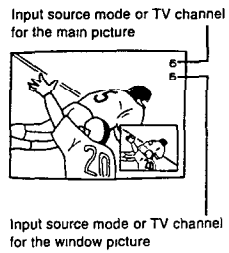




Note
If the main picture is blocked. Picture-In-Picture does not function.
Press EXIT to cancel CHANNEL BLOCK. (Setting CHANNEL BLOCK.)

To display 8 window picture — PIP

Press PIP



A window picture will appear in the same mode as the last time you used Picture-in-Picture.

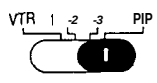
To change the input mode of a wmdow picture

Press TV/VIDEO (◀◀) on the Remote Commander. Each time you press this button, TV, VIDEO 1 or VIDEO 2 mode will be selected in sequence.

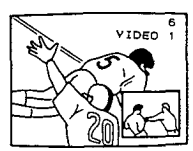
Picture-m-Picture also functions when the main picture is in VIDEO mode.

To swap the main and wmdow pictures -SWAP

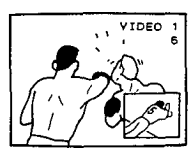
1 Set the VTR 1/2/3/PIP selector to PIP



2 **Press PIP to display a wmdow** picture.



3 Press SWAP



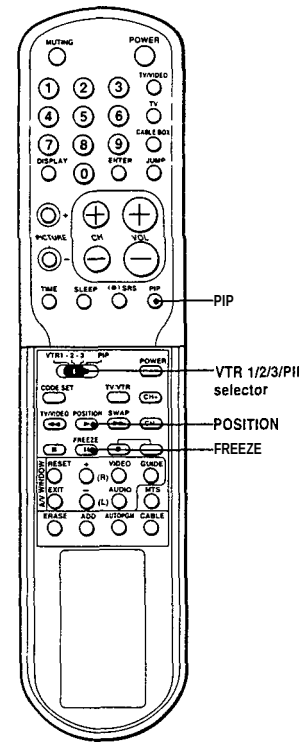
Press SWAP again to swap the pictures again.

To make the **window picture** disappear Press **PIP** again.

To **scan** channels in the window **picture** Press CH +/-on the Remote Commander.

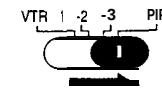
Notes on the **window** picture

- You cannot hear the sound of the wmdow picture channel.
- If a window picture is blocked, the "BLOCKED" display will appear on the main screen.

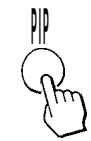


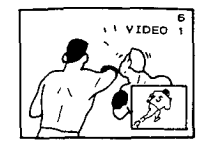
To change the position of the window picture — POSITION

1 Set the VTR 1/2/3/PIP selector to PIP

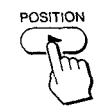


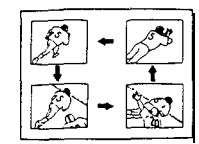
2 **Press PIP to display a wmdow** picture.





3 Press POSITION.
Each time POSITION is pressed, the window picture will move counterclockwise on the screen as illustrated.

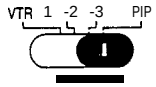




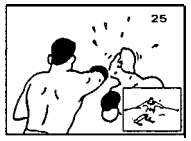
Note
After turning the TV off, when you turn the TV on again the window picture will appear in the same position as it was when the TV was turned off.

To freeze a window picture — FREEZE

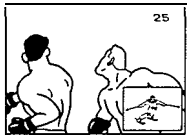
1 Set the VTR 1/2/3/PIP selector to PIP



2 Press PIP to display a window picture.



3 Press FREEZE.
The window picture will freeze.
Use this feature when you want to write down the recipe of a cooking program or a displayed toll free number, etc.



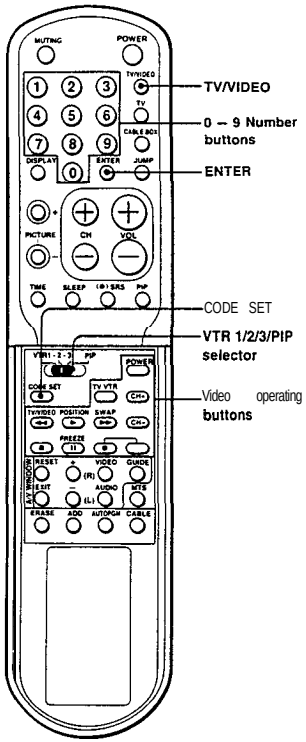
To restore the normal picture
Press FREEZE again.

Note
The broadcast will be progressing normally while the still picture is on the screen

I-6. USING THE REMOTE COMMANDER

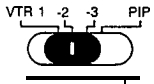
You can operate other video equipment (such as VCRs, video disc players and cable boxes) that have an Infrared remote detector with this supplied Remote Commander.

Operating Sony Video Equipment



When using Sony video cassette recorders (Beta, 8 mm, VHS), follow the steps below.

1 Set the VTR 1/2/3/PIP selector according to the video equipment you want to operate.



If you want to operate a:	set to:
Beta, ED Beta VCR	VTR 1
a mm VCR	VTR 2
VHS VCR	VTR 3

When using VCR equipment. select VIDEO 1 or VIDEO 2 mode by pressing the TV/VIDEO button.

2 Use the video operating buttons to operate video equipment.

Operating a VCR	
To turn on or off	Press POWER.
To change channels (when watching TV programs through the VCR's tuner)	Press CH +/–
To record	Press ● (2 buttons simultaneously).
To play	Press ▶
To stop	Press ■.
To fast forward	Press ▶▶
To rewind the tape	Press ◀◀.
To pause	Press ❚❚. To resume normal playback. press again.
To search *the* picture forward and backward	Keep pressing ▶▶ or ◀◀ during playback. *To resume normal playback, release the button.*

To return to TV mode
Press POWER to turn off the VCR

Note
If the video equipment does not have a certain function, the corresponding button on this Remote Commander will not operate.

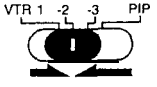
Caution
When you replace the batteries, do it within approximately 30 minutes. Otherwise Sony equipment Settings and the settings you made under the Pre-Programmed function may be erased

Operating Non-Sony or Sony Video Equipment (Pre-Programmed Function)

Setting the code number

When "smg other makers' video equipment as well as Sony's, or when using a Sony video disc player. follow the steps below.
Example: To operate an RCA video cassette recorder when you set the VTR 1/2/3/PIP selector to VTR 2.

1 Set the VTR 1/2/3/PIP selector to VTR 2.

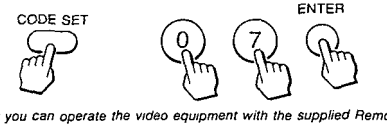


*You can use the VTR 1/2/3 settings, but not PIP **
By employing these three setttings, you can use your Remote Commander to operate up to 3 pieces of equipment.

To use another manufacturer's equipment besides a Sony VTR, set the selector to a position not being used for your Sony video equipment.

**Set the selector to PIP only to use Picture-in-Picture controls*

2 While pressing CODE SET, press the number buttons for your manufacturer's code number (see charts). For RCA, press 0, 7 and ENTER.



Now you can operate the video equipment with the supplied Remote Commander.

Notes
- If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.
- If you enter a new code number, the code number previously entered at that setting will be erased.

3 Use the video operating buttons to operate video equipment.
Operating a VCR
See the table on p. 22.

Operating a Video Disc Player	
To turn on or off	Press POWER.
To play	Press ►
To stop	Press ■.
To pause	Press II. *To resume normal playback, press again.* * This function is effective only for CAV (standard-play disc). With CLV (extended-play disc), the TV will go into the standby mode if II is pressed.
To search the picture forward and backward	Keep pressing ►► or ◄◄ during playback. *To resume normal playback,* release the *button.*

Manufacturers and Code Numbers (VCR)

MANUFACTURER	CODE
SONY	01, 02, 03, 04
CANON	05
EMERSON	22, 28, 30, 33
GENERAL ELECTRIC	05
HITACHI	07
JVC	16
MAGNAVOX	05, 06, 09
MITSUBISHI	18, 19, 26, 27
NEC	16
PANASONIC	05
PHILCO	05, 06
PHILIPS	05, 06, 09
QUASAR	05
RCA	07, 08
SANYO	11, 15
SCOTT	21
SHARP	13, 14
SYLVANIA	05, 06, 09
TEKNIKA	28
TOSHIBA	20, 21
ZENITH	17

Sony Equipment and Code Numbers

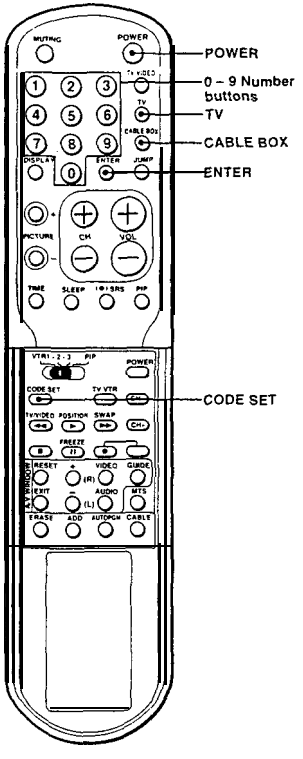
SONY EQUIPMENT	CODE
Beta, ED Beta VCR	01
8 mm VCR	02
VHS VCR	03
Video disc player	04

Note
In some rare cases, you may not be able to operate your non-Sony video equipment with the supplied Remote Commander. This is because your equipment may "se a code that is not provided with this Remote Commander. I" this case. please use the equipment's own remote control unit.

For your convenience
Write the manufacturer name and code number for your equipment onto one of the supplied self-adhesive labels and affix the label to the Remote Commander for easy reference.

	BRAND	CODE
1		
2		
3		

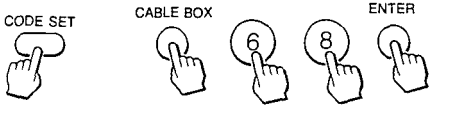
Operating a Cable Converter Box (Pre-Programmed Function)



Setting the code number

When using a cable converter box. follow the steps below
Example: To operate a Zenith cable converter box.

While pressing CODE SET, press CABLE BOX and the number buttons for your distributor s code number (see chart). For Zenith, press 6, 8 and ENTER.

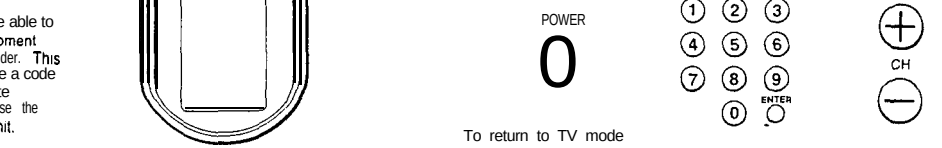


Notes
- If more than one code number is listed. try entering them one by one. until you come to the correct code for your equipment.
- If you enter a new code number, the code number previously entered at that setting will be erased.
- In some rare cases. you may not be able to operate your cable converter box with the supplied Remote Commander. This is because your equipment may "se a code that is not provided with this Remote Commander. In this case. please "se the equipment's own remote control unit.

Operating your cable converter box

1 Press CABLE BOX.

2 Use the TV control buttons [POWER, 0 – 9, ENTER and CH +/–) to control the cable converter box.



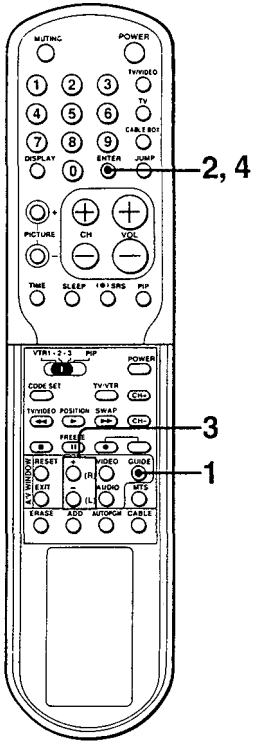
To return to TV mode
Press TV.
You can then use the TV control buttons to control the TV.

For details, refer to the cable box's Instructions.

DISTRIBUTOR	CODE
JERROLD	60. 61, 62, 63. 64.65
PIONEER	69.70
SCIENTIFIC ATLANTA	66.67
TOCOM	**71.72**
ZENITH	*68*

1-7. USING THE GUIDE FUNCTION

Use the GUIDE function to call up the on-screen menu, which gives you instructions on how to set the CURRENT TIME, ON/OFF TIMER, CHANNEL BLOCK, VIDEO I.D and CHANNEL CAPTION



Setting the Clock — CURRENT TIME SET

Example: Set the clock to Monday, 5:30 PM.

1 Press GUIDE.
Press repeatedly until the "CURRENT TIME SET" display turns red.

GUIDE

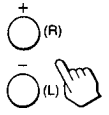
```
GUIDE
CURRENT TIME SET
ON/OFF TIMER
CHANNEL BLOCK
VIDEO I.D.
CHANNEL CAPTION
```

2 Press ENTER

ENTER

```
CURRENT TIME SET
SUN __:__ AM
SELECT TODAY'S
DAY
PLEASE USE[+][-]
&[ENTER].
```

3 Press the A/V WINDOW +/– buttons to select the day of the week.



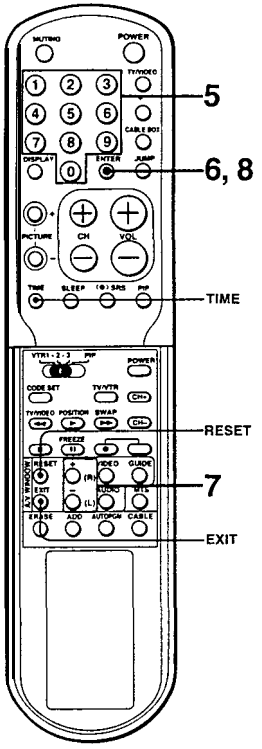

```
CURRENT TIME SET
MON __:__ AM
SELECT TODAY'S
DAY
PLEASE USE[+][-]
&[ENTER].
```

4 Press ENTER.
(If the time is already set, the time currently set will appear. Proceed to step 5 (p.26) to enter a new time.

ENTER

```
CURRENT TIME SET
MON __:__ AM
SET THE CURRENT
TIME.
PLEASE USE [0-9]
&[ENTER].
```

(cont'd. on next page)



Notes

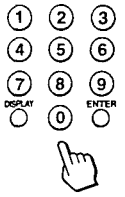
- The ON/OFF TIMER and CHANNEL BLOCK will operate only if the clock is set correctly.
- The internal clock of this TV operates on a 12-hour cycle. If you enter a 24-hour cycle number. it will be cleared when you press ENTER.

12:00 AM stands for midnight.
12:00 PM stands for noon.

- If you unplug the TV. or if a power failure occurs. all settings will be erased from the TV's memory. and the internal clock will return to the factory-set condition. Follow steps 1 – 8 to reset the current time.

Setting the Clock -CURRENT TIME SET (cont'd. from **prev.** page)

5 Press For example, 0 – 9 to set set the 5:30, current press time. 0,5, 3 and 0. (You must press 4 digits.)



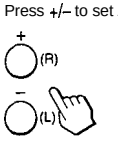
```
CURRENT TIME SET
MON 05:30 AM
SET THE CURRENT
TIME.
PLEASE USE [0-9]
&[ENTER].
```

6 Press ENTER.

ENTER

```
CURRENT TIME SET
MON 05:30 A U
SELECT A" OR PM.
PLEASE USE[+][-]
&[ENTER].
```

7 Press +/– to set AM or PM.




```
CURRENT TIME SET
MON 05:30 PM
SELECT AM OR PM.
PLEASE USE[+][-]
&[ENTER]
```

8 Press ENTER.
The moment you press ENTER, the internal clock will start. The screen display will indicate that the clock has been set. The display will disappear automatically after approximately 5 seconds.

ENTER

```
CURRENT TIME SET
MON _5:30 PM
CURRENT TIME IS
SET THANK YOU.
```

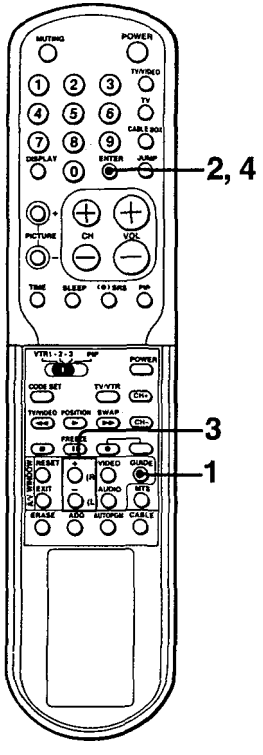
To clear the current time *setting*
Call up the "CURRENT TIME SET" display (steps 1 and 2. p. 25; press RESET. then EXIT.

To enter a new **time setting**
Call up the 'CURRENT TIME SET" display; press RESET, then repeat steps 3 to 8

To **display** the current **time**
Press TIME.

To turn **off** the display
Press TIME again.

TO restore **the normal picture**
Press EXIT.



Setting the ON/OFF TIMER

Set the ON/OFF TIMER to make the program of your choice appear on the screen at the desired time.
Example: Set the timer to turn on the N to channel 8 for 3 hours, from 1:00 PM every Monday through Friday.

1 Press GUIDE.
Press repeatedly until the "ON/OFF TIMER" display turns red.

GUIDE

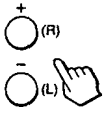
```
GUIDE

CURRENT TIME SET
ON/OFF TIMER
CHANNEL BLOCK
VIDEO I.D.
CHANNEL CAPTION
```

2 Press ENTER.
Instructions for selecting the day appear.
(If the clock has not been set. the display 'PLEASE SET THE CURRENT TIME FIRST" will appear on the screen.
Go back to p. 25 — 'Setting the Clock'.)

ENTER

```
ON/OFF TIMER

EVERY SUN-SAT
--:--AM _H CH___

SELECT THE DAY
PLEASE USE[+][-]
&[ENTER].
```

3 Press the AN WINDOW +/– buttons to select the day of the week.
(See illustration on p. 30)



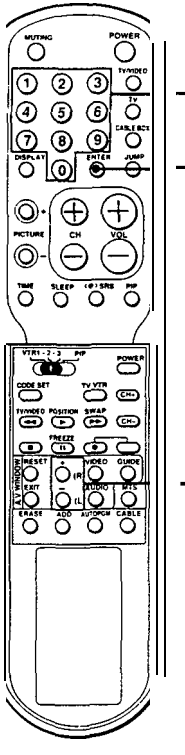

```
ON/OFF TIMER

EYERY MON-FRI
--:--AM _H CH___

SELECT THE DAY
PLEASE USE[+][-]
&[ENTER].
```

4 Press ENTER.
Instructions for setting the time appear.

ENTER

```
ON/OFF TIMER

EVERY MON-FRI
--:--AM _H CH___

SET THE TIME.
PLEASE USE [0-9]
& [ENTER]
```

(cont'd. on next page)



5 Press For example, 0 – 9 to to set set the 1:00, desired press time. 0, 1, 0 and 0. (You must press 4 digits.)

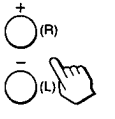

```
ON/OFF TIMER

EVERY MON-FRI
01:00AM _H CH___

SET THE TIME.
PLEASE USE [0-9]
&[ENTER].
```

6 Press ENTER.

ENTER

```
ON/OFF TIMER

EVERY MON-FRI
01::00AM _H CH___

SELECT AM OR PM.
PLEASE USE[+][-]
&[ENTER].
```

7 Press +/– to set AM or PM.



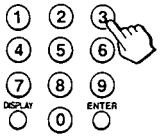

```
ON/OFF TIMER

EVERY MON-FRI
01:00PM _H CH___

SELECT AM OR PM.
PLEASE USE[+][-]
&[ENTER].
```

8 Press ENTER

ENTER

```
ON/OFF TIMER

EVERY MON-FRI
01:00PM _H CH___

SET THE DURATION.
PLEASE USE [0-9]
&[ENTER].
```

9 Press 1 – 9 to set the duration (up to 9 hours).

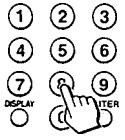


```
ON/OFF TIMER

EVERY MON-FRI
01:00PM 3H CH___

SET THE DURATION
PLEASE USE [0-9]
&[ENTER].
```

10 Press ENTER

```
ON/OFF TIMER

EVERY MON-FRI
01:00PM 3H CH___

SET THE CHANNEL.
PLEASE USE [0-9]
&[ENTER].
```

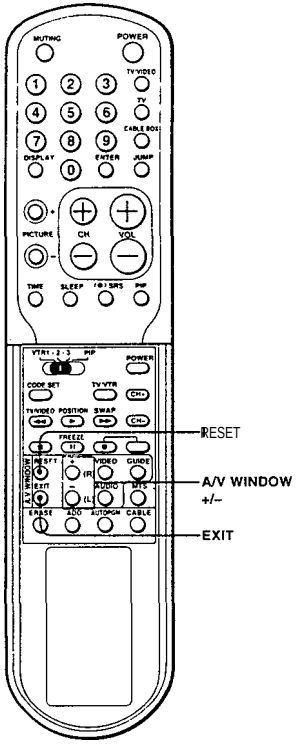
11 Press 0 – 9 to set the desired channel number.



```
ON/OFF TIMER

EVERY MON-FRI
01:00PM 3H CH__8

SET THE CHANNEL.
PLEASE USE [0-9]
&[ENTER].
```

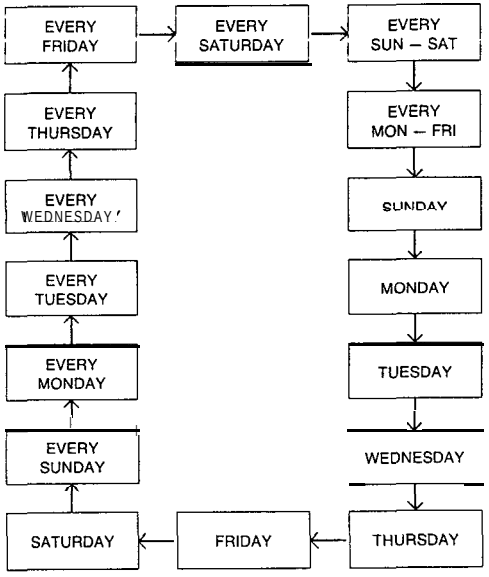
12 Press ENTER.
The following display will appear on the screen. and the TIMER indicator lamp on the TV will light up, showing that the ON/OFF TIMER has been set.

```
ON/OFF TIMER

EVERY MON-FRI
_1:00PM 3H CH__8

ON/OFF TIMER IS
SET  THANK YOU.
```

Setting the ON/OFF TIMER (cont'd. from prev. page)

When you press A/V/WINDOW + button. the selectable days will appear in the following order. (See Step 3.)



Press the A/V WINDOW button to move in the reverse direction.

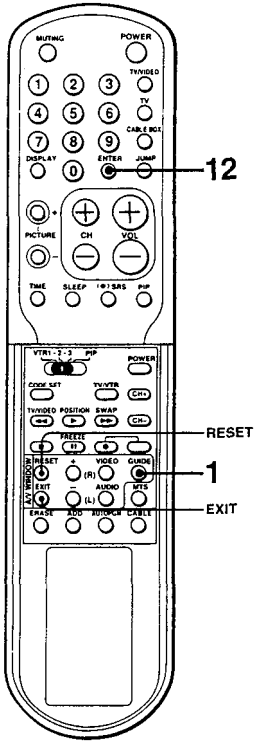
To clear the setting
Call the "ON/OFF TIMER" page (steps 1 and 2). Press RESET. then EXIT.

To reset the Setting
Call the 'ON/OFF TIMER" page Press RESET. then repeat steps 3 to 12.

To restore the normal picture
Press EXIT.

Notes

- The "TIMER WILL BE OFF" display will appear on the screen one minute before the timer goes off.
- If you unplug the TV. or a power failure occurs. both the clock and timer settings will be erased. Reset the current time. then set the timer.



Setting CHANNEL BLOCK

CHANNEL BLOCK prevents a channel from appearing on the screen during the time that you set. We suggest that you use this function to prevent children from watching undesirable programs.

Example: Set CHANNEL BLOCK for 1 hour. at 4:00 PM every Saturday. on channel 12.

1 Press GUIDE.
Press repeatedly until the "CHANNEL BLOCK" display turns red

GUIDE

```
GUIDE

CURRENT TIME SET
ON/OFF TIMER
CHANNEL BLOCK
VIDEO I.D.
CHANNEL CAPTION
```

2 - 11 Same as "Setting the ON/OFF TIMER

12 Press ENTER
The following display will appear, indicating that CHANNEL BLOCK has been set.
At the preset time, the picture of the selected channel will be blocked from view, and the sound will be muted. A red "BLOCKED" display will appear on the screen while the channel is blocked.

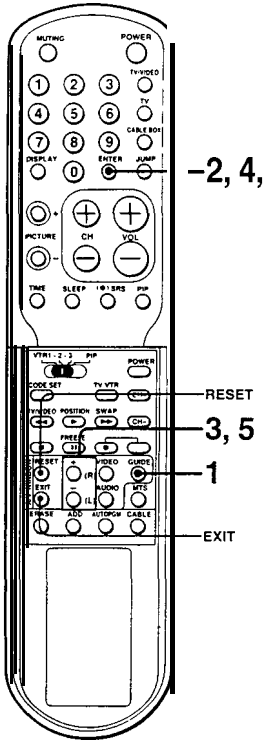
ENTER

```
CHANNEL BLOCK

EVERY SATURDAY
-4:00PM 2H CH-12

CHANNEL BLOCK IS
SET  THANK YOU.
```

To clear the setting
Call up the "CHANNEL BLOCK" page (steps 1 and 2). Press RESET. then EXIT

To reset the setting
Call up the "CHANNEL BLOCK" page, then repeat steps 1 through 12.

To restore the normal picture
Press EXIT.



Setting VIDEO I.D.

Use this function to Identify the type of video equipment connected to the VIDEO 1 and VIDEO 2 IN jacks. You can change the VIDEO 1 display to BETA. 8 mm, VHS, LD (laser disc player) or S VIDEO. and the VIDEO 2 display lo BETA, 8 mm. VHS or LD (laser disc player).

Note
The VIDEO I.D. function works only with the main picture

1 Press GUIDE.
Press repeatedly until the "VIDEO I.D." display turns red.

GUIDE

```
GUIDE

CURRENT TIME SET
ON/OFF TIMER
CHANNEL BLOCK
VIDEO I.D.
CHANNEL CAPTION
```

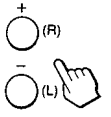
2 Press ENTER.

ENTER

```
VIDEO I.D.

VIDEO 1  VIDEO 1
VIDEO 2: VIDEO 2

PLEASE USE[+][-]
&[ENTER]
```

Display is red

3 Press the A/V WINDOW +/– buttons to select the I.D. for VIDEO 1




```
VIDEO I.D.

VIDEO 1  S VIDEO
VIDEO 2: VIDEO 2

PLEASE USE[+][-]
&[ENTER].
```

Display is red

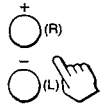
4 Press ENTER.

ENTER

```
VIDEO I.D.

VIDEO 1  S VIDEO
VIDEO 2: VIDEO 2

PLEASE USE[+][-]
&[ENTER].
```

Display is red

5 Press the AIV WINDOW + / – buttons to select the I.D. for VIDEO 2 (See chart below).




```
VIDEO I.D.

VIDEO 1   S VIDEO
VIDEO 2:    8mm      <- Display is red

PLEASE USE[+][-]
&[ENTER].
```

6 Press ENTER.
A display will appear indicating the VIDEO I.D. has been set.

```
VIDEO I.D.

VIDEO 1   S VIDEO
VIDEO 2:    8mm

VIDEO I.D. IS
SET   THANK YOU.
```

Setting the I.D.

Each time you press A/V WINDOW +, the I.D. will change in the following order:
VIDEO 1 I.D. Settings

VIDEO 1 → BETA → 8 mm → VHS → LD → S VIDEO
↑ ←

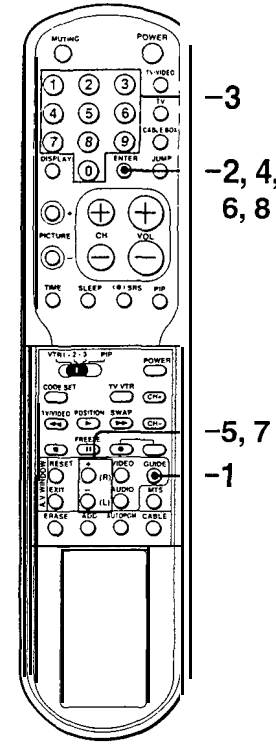
VIDEO 2 I.D. Settings

VIDEO 2 → BETA → 8 mm → VHS → LD

To move in the reverse direction
Press A/V WINDOW –

To reset the setting
Call the "VIDEO I.D." screen. then repeat steps 1–6

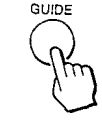
To restore the normal picture
Press EXIT.



Settina CHANNEL CAPTION

Use this function to caption each channel number display with the channel call letters (up to four letters).

1 Press GUIDE.
Press repeatedly until the "CHANNEL CAPTION" display turns red.

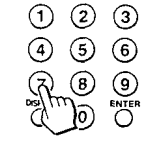



```
GUIDE

CURRENT TIME SET
ON/OFF TIMER
CHANNEL BLOCK
VIDEO I.D.
CHANNEL CAPTION
```

2 Press ENTER.

```
CHANNEL      ___
CAPTION      ____

ENTER THE CH
TO BE CAPTIONED.
PLEASE USE [0-9]
&[ENTER].
```

3 Press the 0 9 buttons to select the channel number you want to caption.

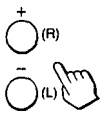



```
CHANNEL      __7
CAPTION      ____

ENTER THE CH
TO BE CAPTIONED.
PLEASE USE [0-9]
&[ENTER]
```

4 Press ENTER.

```
CHANNEL      __7
CAPTION      ____

SELECT THE 1ST
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

5 Press the AIV WINDOW +/– buttons to choose the first letter of the caption.

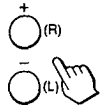



```
CHANNEL        __7
CAPTION        E___

SELECT THE 1ST
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

6 Press ENTER

```
CHANNEL        __7
CAPTION        E___

SELECT THE 2ND
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

7 Press the A/V WINDOW +I- buttons to choose the second letter Of the caption.

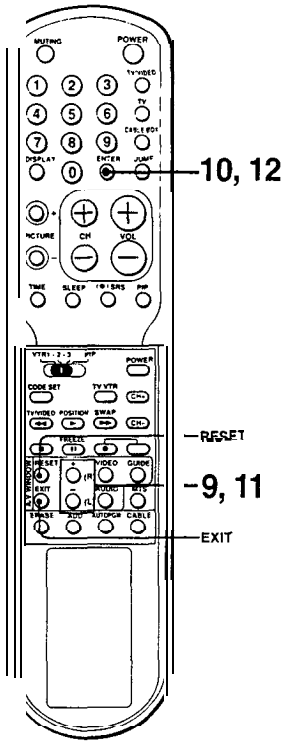



```
CHANNEL        __7
CAPTION        ES__

SELECT THE 2ND
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

8 Press ENTER.

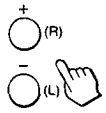
```
CHANNEL        __7
CAPTION        ES__

SELECT THE 3RD
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

(cont'd. on next page)



Setting CHANNEL CAPTION (cont'd. from **prev.** page)

9 Press the AN WINDOW +/– buttons to choose the third letter of the caption.




```
CHANNEL        __7
CAPTION        ESP_

SELECT THE 3RD
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

10 Press ENTER

```
CHANNEL        __7
CAPTION        ESP_

SELECT THE 4TH
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

11 Press the AN WINDOW +/-buttons to choose the fourth letter of the caption.

```
CHANNEL        __7
CAPTION        ESPN

SELECT THE 4TH
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

12 Press ENTER.
The channel caption is set.

```
CHANNEL        __7
CAPTION        ESPN

PRESS[+]FOR MORE
```

To set more captions
Press A/V WINDOW +, then repeat steps 3 – 12

To **clear** the setting
Call up the "CHANNEL CAPTION screen and press RESET, the" EXIT.

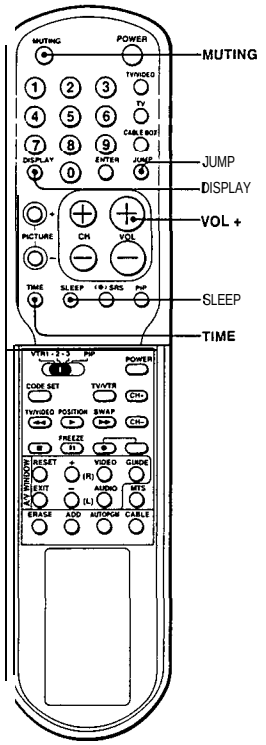
To reset the setting
Call up the 'CHANNEL CAPTION" **screen.** Press RESET, then repeat steps 3 – **12.**

To restore the normal picture
Press EXIT.

Notes

. If you want to leave a blank space in the channel number or caption. press ENTER without pressing A/V WINDOW +/–
• You *can enter up to 32* channel captions.

1-8. ENJOYING OTHER USEFUL FEATURES



Muting the sound--MUTING

Press MUTING.
The display "MUTING" *will* appear *on the screen.*

To restore the sound
Press MUTING again, or press VOL +

Keepmg the channel displayed — DISPLAY

To display the channel
Press DISPLAY.

The main picture input mode. channel caption, Multichannel TV Sound (MTS), and Picture-in-Picture input mode will appear for a few seconds, then disappear. The main picture input mode will remain on the screen

To turn off the display
Press DISPLAY again.
The main picture input mode will disappear.

Using the sleep timer — SLEEP

Turns TV off automatically approximately 1 hour after setting.
Press SLEEP
A green "SLEEP ON " *display* appears *for a few seconds.*
A red "SLEEP " display will appear I *minute before the* TV *shuts* on.
To cancel the setting
Press SLEEP again.
A green "SLEEP OFF" display appears *for approximately* 3 seconds.
OR
Turn the TV off.
The sleep timer setting will be cancelled

Switching quickly between 2 channels — JUMP

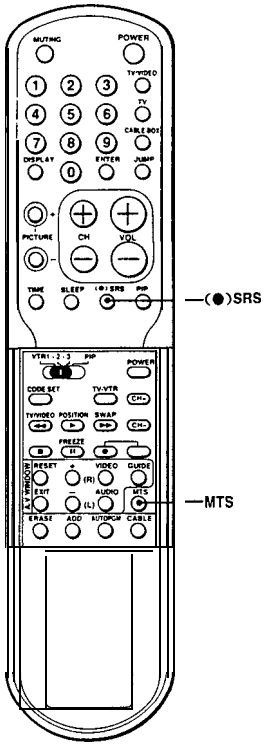
Press JUMP once to recall the channel you were watching previously; press JUMP again to switch back. Use this feature to keep track of two programs alternately.

Displaymg the current time -TIME

To display the current time
Press TIME.

To turn off the display
Press TIME again.

Note
The display will not appear if the current time has not been set (p. 25).



Receiving a Multichannel TV Sound program — MTS

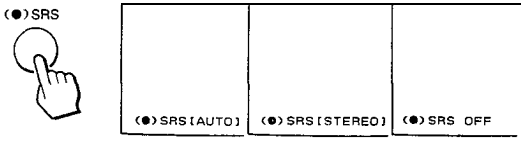
Each time you press MTS. the MAIN. SAP (Second Audio Program) and MONO modes are *selected* in sequence. *The* display (in green) *for* each *mode will appear on the screen for approximately 3 seconds.*
(NOTE: During SAP modes. the sound will be muted.)

To listen to stereo sound
Press MTS lo select MAIN mode.
The MAIN display will appear on the screen.
The STEREO indicator lamp on the TV will light up whenever a stereo broadcast is received.

Notes
- A weak incoming signal may cause excessive noise with some stereo broadcasts. Select MONO mode to eliminate this noise.
- MTS functions only when the main picture is in TV mode.

Receiving lifelike sound reproduction — (●)SRS

The Sound Retrieval System (SRS) allows you to select the sound mode you prefer
Each lime *you press* (●) SRS, "(●)SRS [AUTO]," "(●)SRS [STEREO]," and "(●)SRS OFF' *modes are selected in sequence.*



In (●)SRS [AUTO] mode, SRS functions in both monaural and stereo modes. Monaural sound programs will have a 'simulated stereo' effect.
In (●) SRS [STEREO] mode, SRS functions only when a stereo program is received.

1-9. TROUBLESHOOTING

Troubleshooting

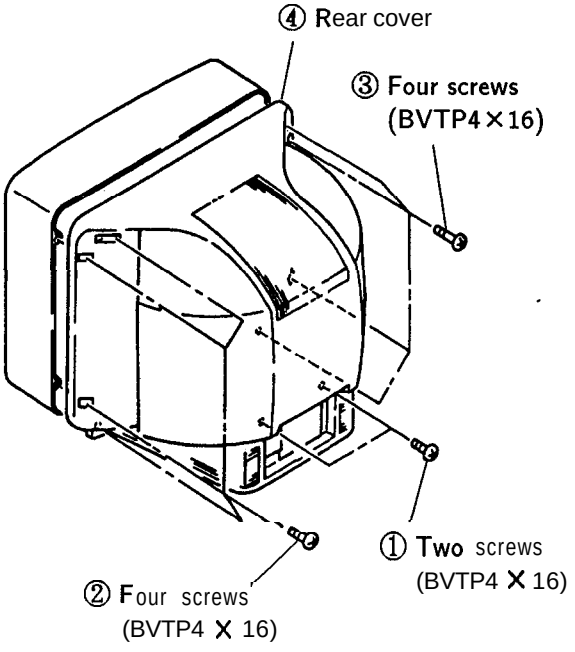
Disturbances in picture and sound can often be eliminated by checking the symptoms and following the suggestions listed below.

SYMPTOM	CHECKANDADJUST
Poor or no picture (screen not lit), good sound	• Adjust PICTURE. *Adjust BRIGHT. *Check antenna/cable connections.
Good picture, no sound	*Press VOLUME + on the N or VOL + on the Remote Commander. • Press MUTING on the Remote Commander. • Check that the MTS button is set correctly. *Check that the TV/VIDEO button is set correctly. • Check that "SPEAKER ON" is set. *Check that the speaker cords are connected to the SPEAKER terminals.
No picture (screen not lit), no sound	• Is POWER switched on? • Plug the unit into a wall outlet. -Check that the TV/VIDEO button is set correctly.
No color	• Is it a color program? *Adjust COLOR.
Snow and noise only	• Is it an active or the correct channel? . Check the CABLE setting. *Check antenna/cable connections.
Dotted lines or stripes	This is often caused by local interference. (e.g. cars. neon signs, hairdryers etc.) Adjust the antenna for minimum interference.
Double images or ghosts	Reflections from nearby mountains or buildings often cause this problem. A highly directional outdoor antenna 0, a CATV cable may improve the picture.
Try another channel.	It could be station trouble.

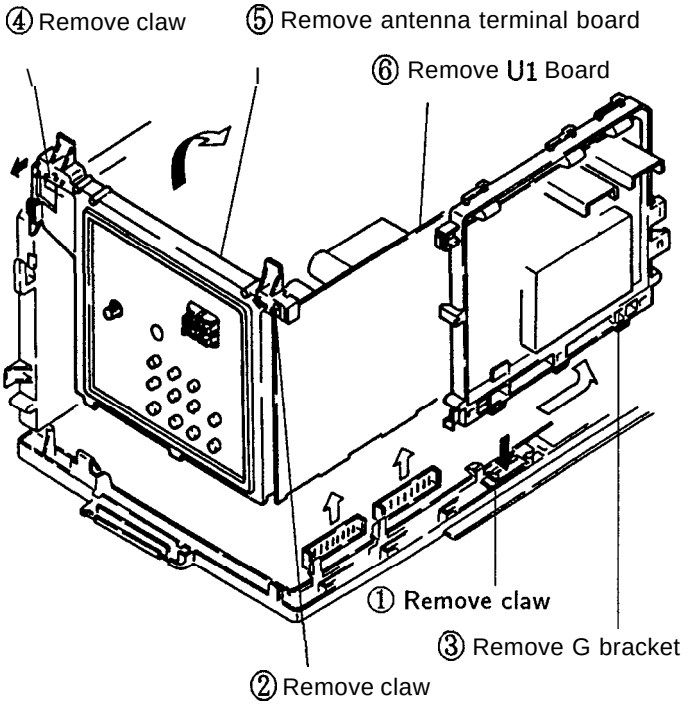
If the problem persists, contact you, nearest service facility.

SECTION 2
DISASSEMBLY

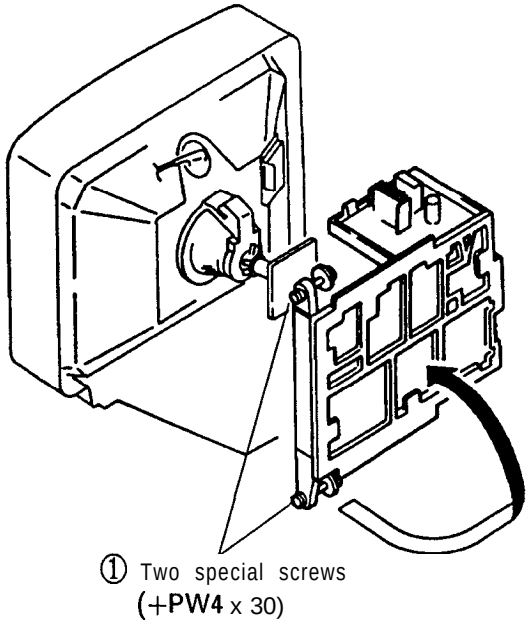
2-I. REAR COVER REMOVAL



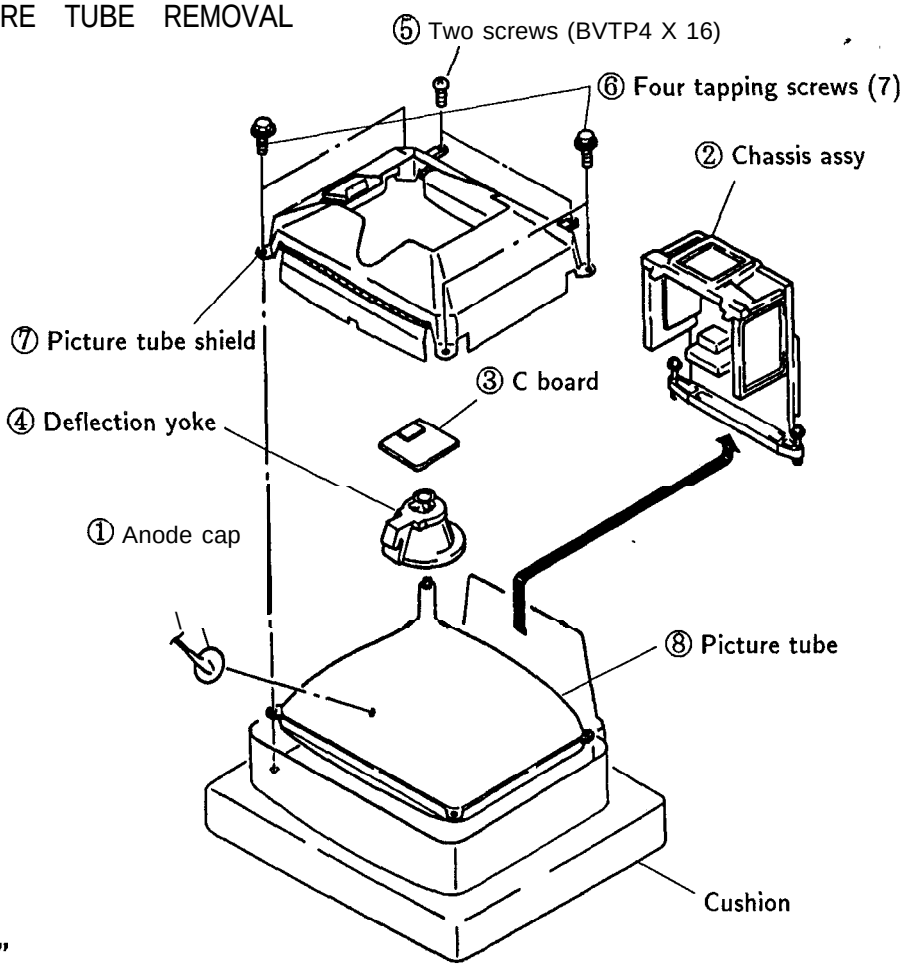
2-2. U1 AND U2 BOARDS REMOVAL



2-3. SERVICE POSITION



2-4. PICTURE TUBE REMOVAL



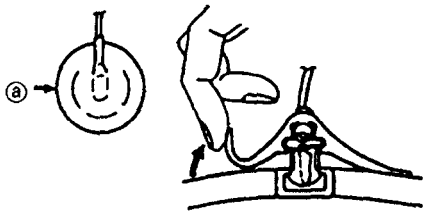
"CAU TION"

TO AVOID AN ELECTRIC SHOCK FROM CHARGED HIGH VOLTAGE OF PICTURE TUBE.

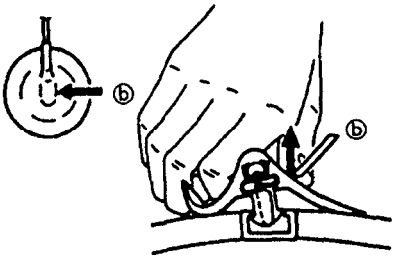
- REMOVAL OF ANODE-CAP

  Short circuit the anode of the picture tube and the anode cap to the metal chassis, CR T chield or carbon painted on the CRT, after removing the anode.

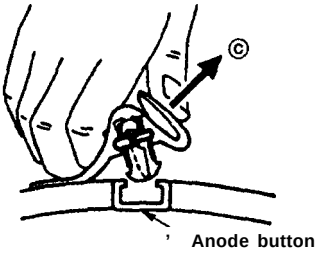
- **REMOVING PROCEDURES**



@Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



@Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



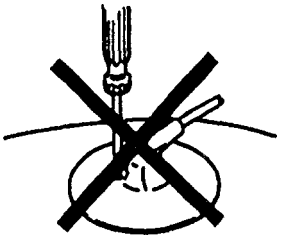
@When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

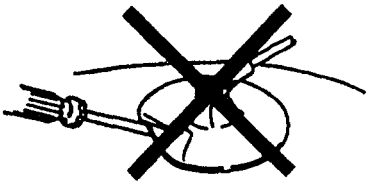
- **HOW TO HANDLE AN ANODE-CAP**

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

The control and switch below should be set as follows unless otherwise noted:

PICTURE control ····· To 80% (Full)
BRIGHTNESS control . . ·· . . RESET position

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note: Test Equipment Required.

1. Pattern Generator
2. Degausser
3. Digital multimeter

Preparation:

- Set the side of the unit with the PICTURE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.

3-I. BEAM LANDING

1. Input a raster signal with the pattern generator.
2. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Fig.2.
3. Turn the raster signal of the pattern generator to green.
4. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and red and blue are at the sides evenly. (Fig.3)
5. Move the deflection yoke forward, and adjust so that entire screen becomes green. (Fig.1)
6. Switch over the raster signal to red and blue and confirm the condition.
7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
8. When landing at the corners is not right, adjust by using the disk magnets. (Fig.4)

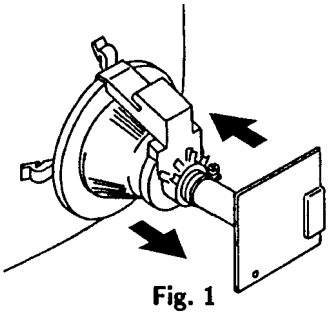


Fig. 1

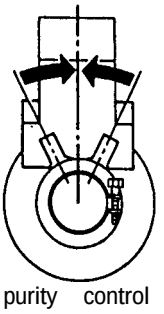


Fig. 2

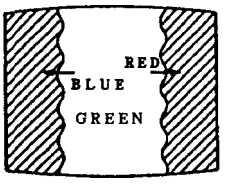


Fig. 3

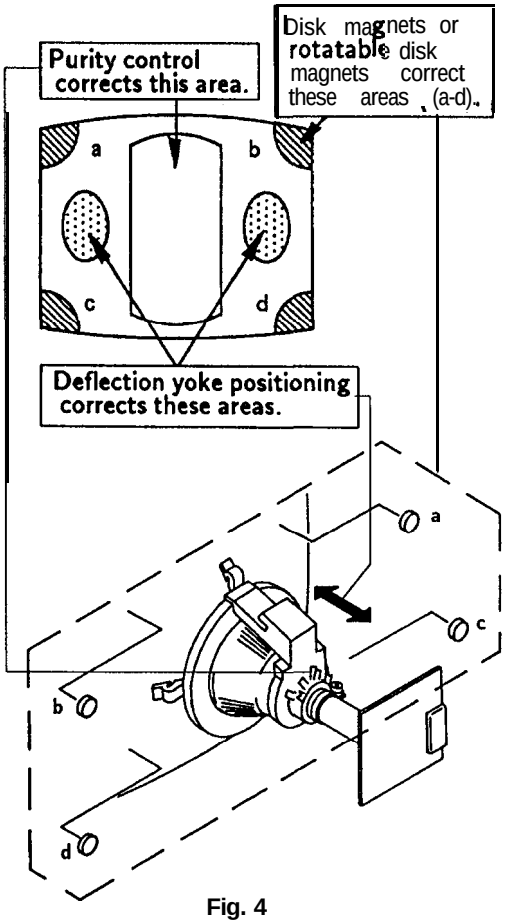


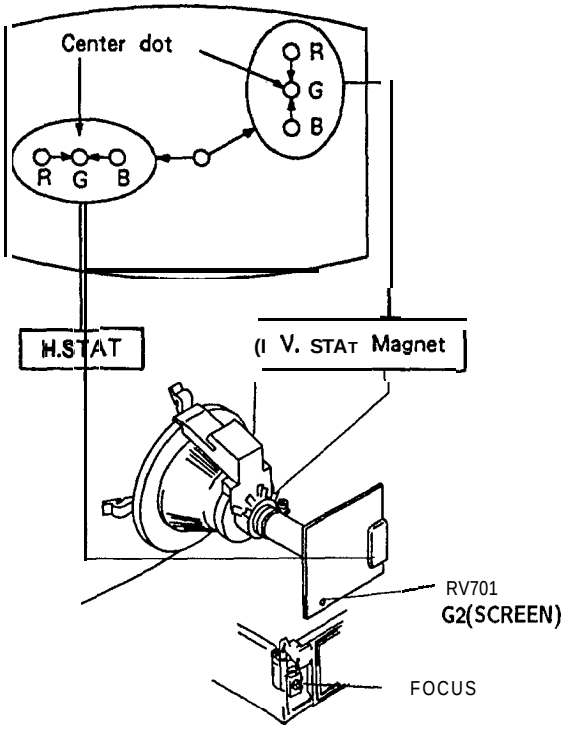
Fig. 4

3-2. CONVERGENCE

Preparation

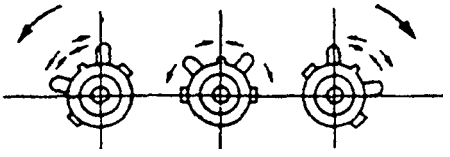
- Before starting, perform FOCUS, H.SIZE, V.LIN and V.SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in dot pattern.

(1) Horizontal and Vertical Static Convergence

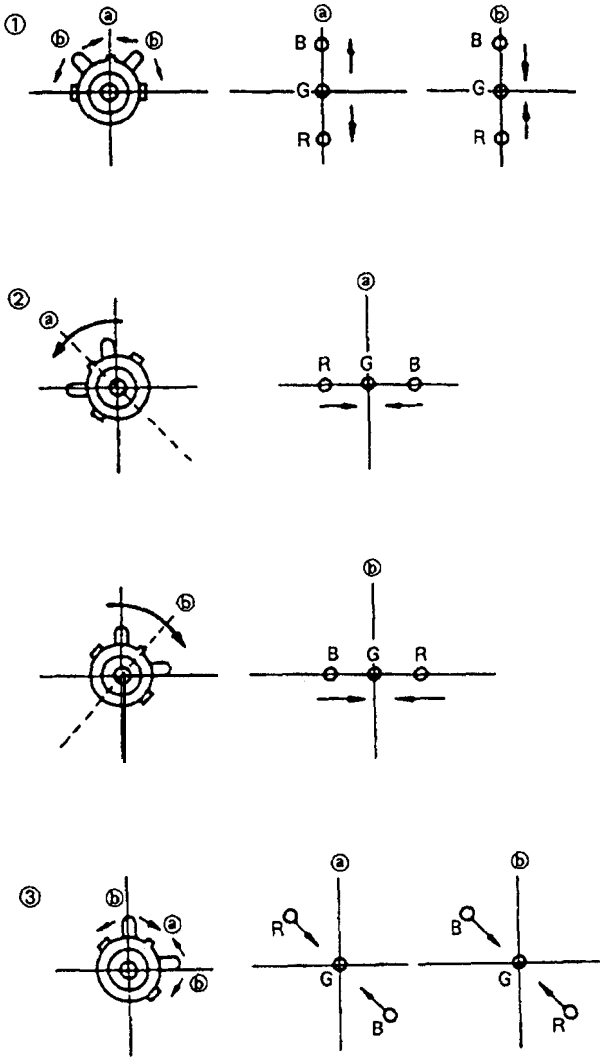


1. Adjust H.STAT VR to converge red, green and blue dots the in center of the screen. (Horizontal movement)
2. Adjust V.STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)
3. If the red, green and blue dots do not converge in the center of the screen with H.STAT VR, perform horizontal convergence adjustment using H.STAT VR and V.STAT magnet as shown below. (In this case, H.STAT VR and V.STAT magnet effect each other.)

- Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.



4. When the V.STAT magnet is moved in the direction of arrow ⓐ and ⓑ, red, green and blue dots move as shown below.

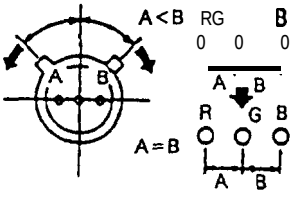


If the blue dot do not converge with red and green dots, perform following steps.

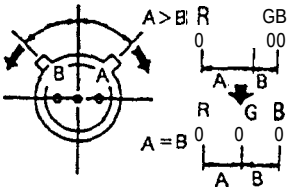
- HMC and VMC correction for BMC (Hexapole) Magnet

1. HMC (Horizontal Mis-convergence) correction and motion of the Electron Beam with the BMC Magnet.

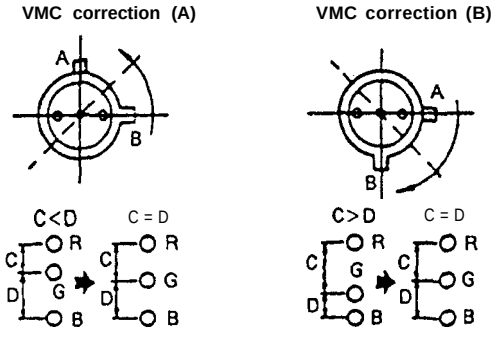
HMC correction (A)

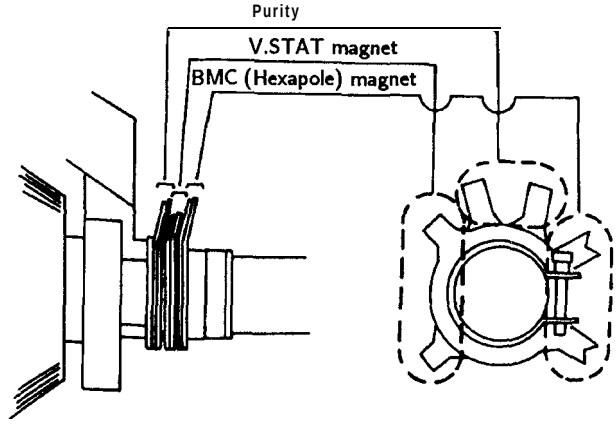


HMC correction (B)



2. VMC (Vertical Mis-convergence) correction and motion of the Electron Beam with the BMC Magnet.



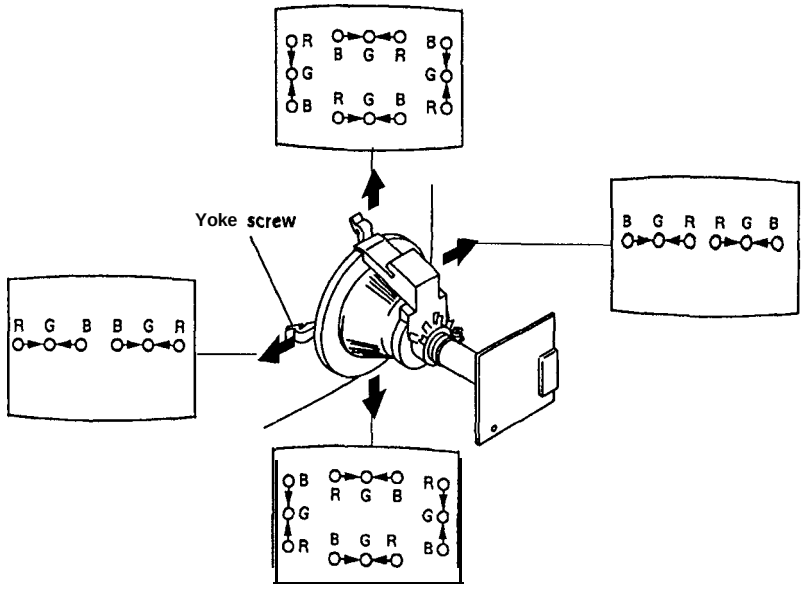


(2) Dynamic Convergence Adjustment

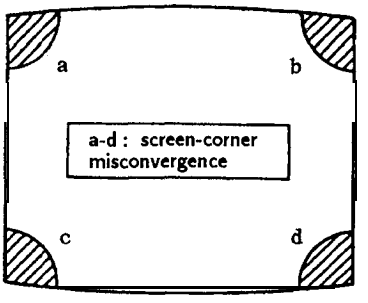
Perpartion :

- Before starting perform Horizontal and Vertical Static convergence adjustment.

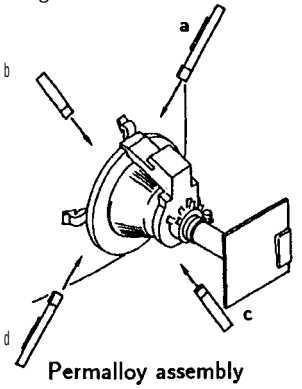
1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers,
3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.



(4) Screen-corner Convergence



Affii a Permalloy ass'y corresponding to the misconverged areas.



Permalloy assembly

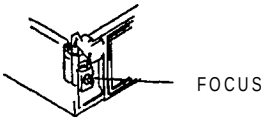
3-3. FOCUS

1. Tune in an off-air signal.

2. PICTURE →control to 80%.

3. Adjust the focus VR on A board so that the focus at the center of the screen is optimum.

(A magenta ring will appear if the focus is adjusted only in the center of the screen. Adjust evenly throughout the entire screen.)



3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G2 (SCREEN) ADJUSTMENT(RV701)

1) Set the PICTURE and BRIGHTNESS to normal.

2) Confirm G1 voltage is within 30.0±5V.

3) Apply DC voltage of 180V to the cathodes of R, G and B from DC stabilized power source.

4) While watching the picture, adjust the G2 control (RV701) to the just the retrace line disappears.

(Using the Remote Commander)

2. WHITE BALANCE ADJUSTMENTS

1) Set to service mode.

2) Press [VIDEO] → [RESET] to normal and if necessaries "TRINITONE" set to "LOW" by ❑ or [-].

3) Input an entire white signal.

4) Set the PICTURE to minimum.

5) Select S BRT with [1] and [4], and then set the level to minimum with [3] and [6].

6) Select G CUT and B CUT with [1] and [4]. And adjust the level with [3] and [6] for the best white balance.

7) Set the PICTURE to maximum.

8) Select G AMP and B AMP with **1** and 4, and adjust the level with [3] and [6] for the best white balance.

9) Write into the memory by pressing [MUTING] → then [ENTER].

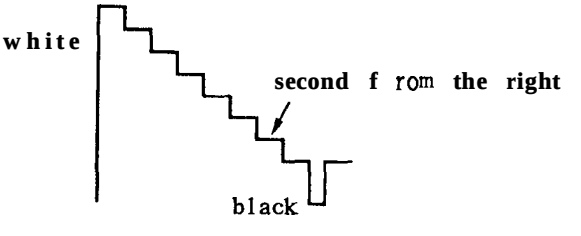
3. SUB BRIGHT ADJUSTMENT

1) Set to service mode.

2) Input a staircase signal of black and white from the pattern generator.

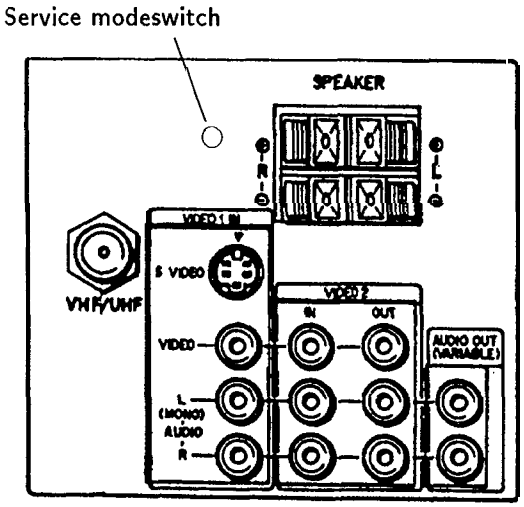
3) BRIGHTNESS ··· RESET
PICTURE ····· minimum

4) Select S BRT with [1] and [4], and adjust SUB BRIGHT level with [3] and [6] so that the stripe second from the right is dimly lit.

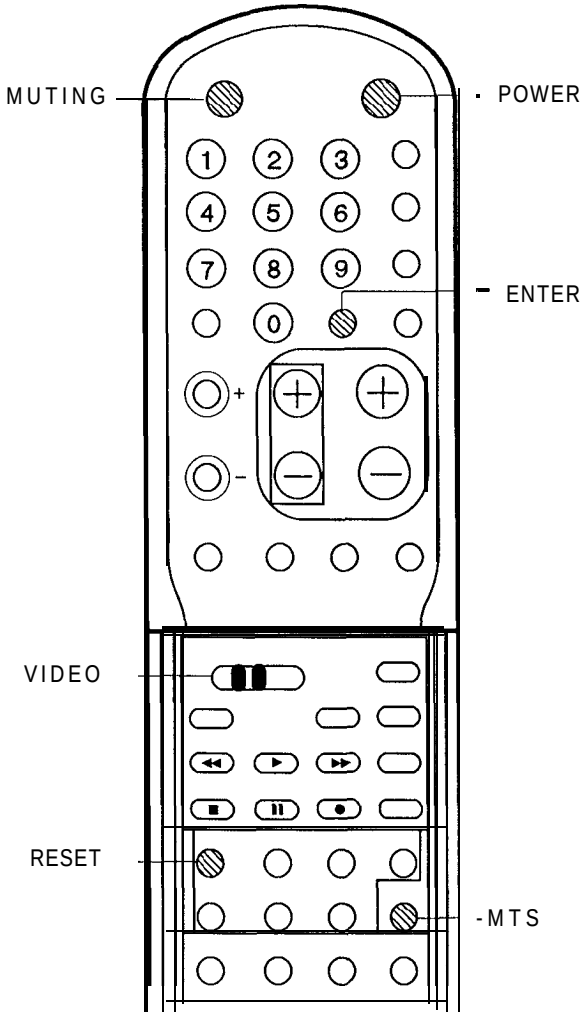


a. **METHOD OF SETTING THE SERVICE MODE**

Press POWER button on the Remote Commander while pressing switch on the rear of the set.



b. ADJUST BUTTONS AND INDICATOR



c . AN ITEM OF ADJUSTMENT

ITEM		NAME REGISTER
GAMP	VP	GREEN AMP.
BAMP	VP	BLUE AMP.
GCUT	VP	GREEN CUT OFF.
BCUT	VP	BLUE CUT OFF
SBRT	VP	BRIGHT

d. **METHOD OF CANCELLATION FROM SERVICE MODE**

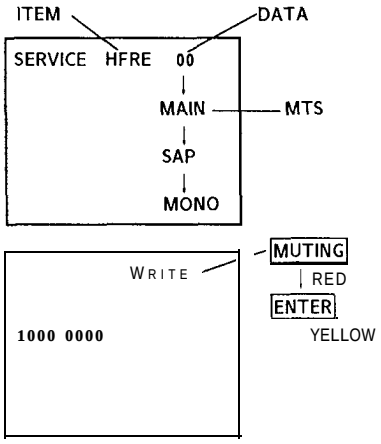
Set the standby condition (Press POWER button on the commander) in the next place, press POWER button again, hereupon it becomes TV mode.

e. METHOD OF WRITE FOR MEMORY

1) Set to Service Mode.
2) Press 1 (UP) and 4 (DOWN), select an item of adjustments.
3) Press (MUTING button Indicate WRITE) on screen.
4) Press ENTER button to write for memory. (At this time WRITE (YELLOW) is indicated on screen.)

f . MEMORY WRITE CONFIRMATION METHOD

1) After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again, confirm they were adjusted.



SECTION 4
SAFETY RELATED ADJUSTMENTS

Note: Test Equipment Required.

1. Ammeter
2. DC Power Supply
3. Digital multimeter
4. Audio OSC
5. Valiable auto-transformer

ABOARDANDCBOARD

☒ R559 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ◪ on the schematic diagram).

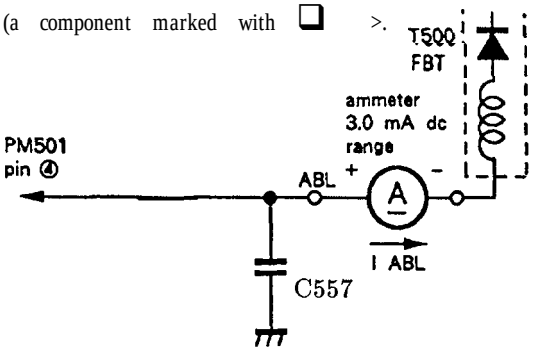
A BOARD : PM501,Q608,Q607,R629,R628,R627,R559 ①

1. Preparation before confirmation
   1) Remove R675 on the G board and connect a variable resistor (RV1 : about 10kΩ) between pin ① of IC653 and B+ line.
   2) Supply 120±2.0V AC to with variable auto-transformer.
2. Hold-down operation confirmation
   1) Turn the POWER switch ON, and input an entirely white signals and adjust ABL current to 1650 ±80 μA with PICTURE and BRIGHT etc controls.
   2) Increase B+ line voltage gradually by adjusting the resistor of RV1. Confirm that the minimum voltage is less than 143.5V DC whereby the raster disappears during operation of hold-down circuit.

      NOTE: When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.
   3) Turn the POWER switch ON, and input a dot signals and adjust ABL current to 150±50μA with PICTURE and BRIGHT etc controls.
   4) Increase B+ line voltage gradually by adjusting the resistor of RV1. Confirm that the minimum voltage is less than 146.5V DC whereby the raster disappears during operation of hold-down circuit.

      NOTE: When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.
3. Hold-down readjustment

   When step 2 is not satisfied, readjustment should be performed by altering the resistance value of R559 (a component marked with ❑ >.



A BOARD AND G BOARD

⊠ R570 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ◪ on the schematic diagram).

A BOARD: PM501, Q608, Q607, D531, C545, R570, R591, R627, R628, T500

G BOARD: IC653, R675

②

1. Preparation before confirmation

1) Turn the POWER switch ON, and input an entirely white signals and set the PICTURE and BRIGHT controls to maximum.
2) Confirm that voltage of the check terminal of TP-85 is more than 108V DC when the set is operating normally with 120.0±2.0V AC supply.

2. Hold-down operation confirmation

1) Turn the POWER switch ON, and input an entirely white signals and adjust ABL current to 1650 ±80 μA with PICTURE and BRIGHT etc controls.
2) Apply DC voltage of over 130V DC gradually to the check terminal of TP85 via 1SS119 from the DC stabilized power source.
   Confirm that the minimum voltage is less than 137.5V DC whereby the raster disappears during operation of hold-down circuit.
   NOTE: When the Hold-down circuit starts operating, switch OFF the POWER of the set immediately.
3) Turn the POWER switch ON, and receive dot signals and adjust ABL current to 150±50μA with PICTURE and BRIGHT etc controls.
4) Apply DC voltage of over 130V gradually to the check terminal of TP85 via 1SS119 from the DC stabilized power source.
   Confirm that the minimum voltage is less than 138.5V DC whereby the raster disappears during operation of hold-down circuit.
   NOTE: When the Hold-down circuit starts operating, switch OFF the POWER of the set immediately.

3. Hold-down readjustment

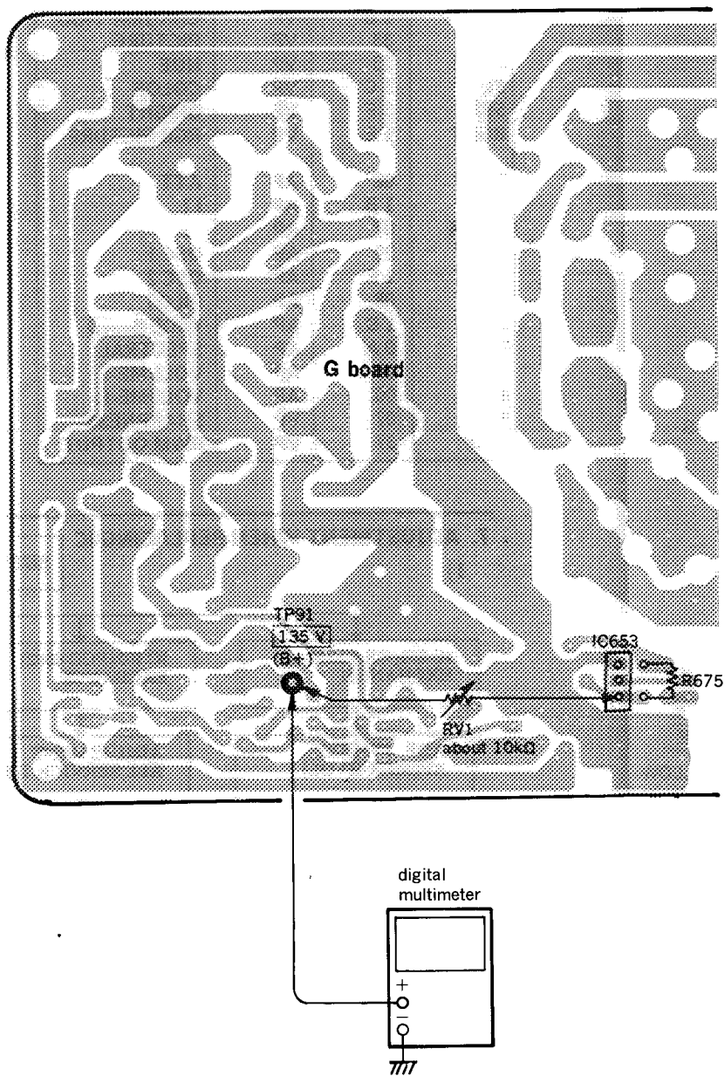
When step 2 is not satisfied, readjustment should be performed by altering the resistance value of R570 carbon 1/4w (a component marked with ⊠).

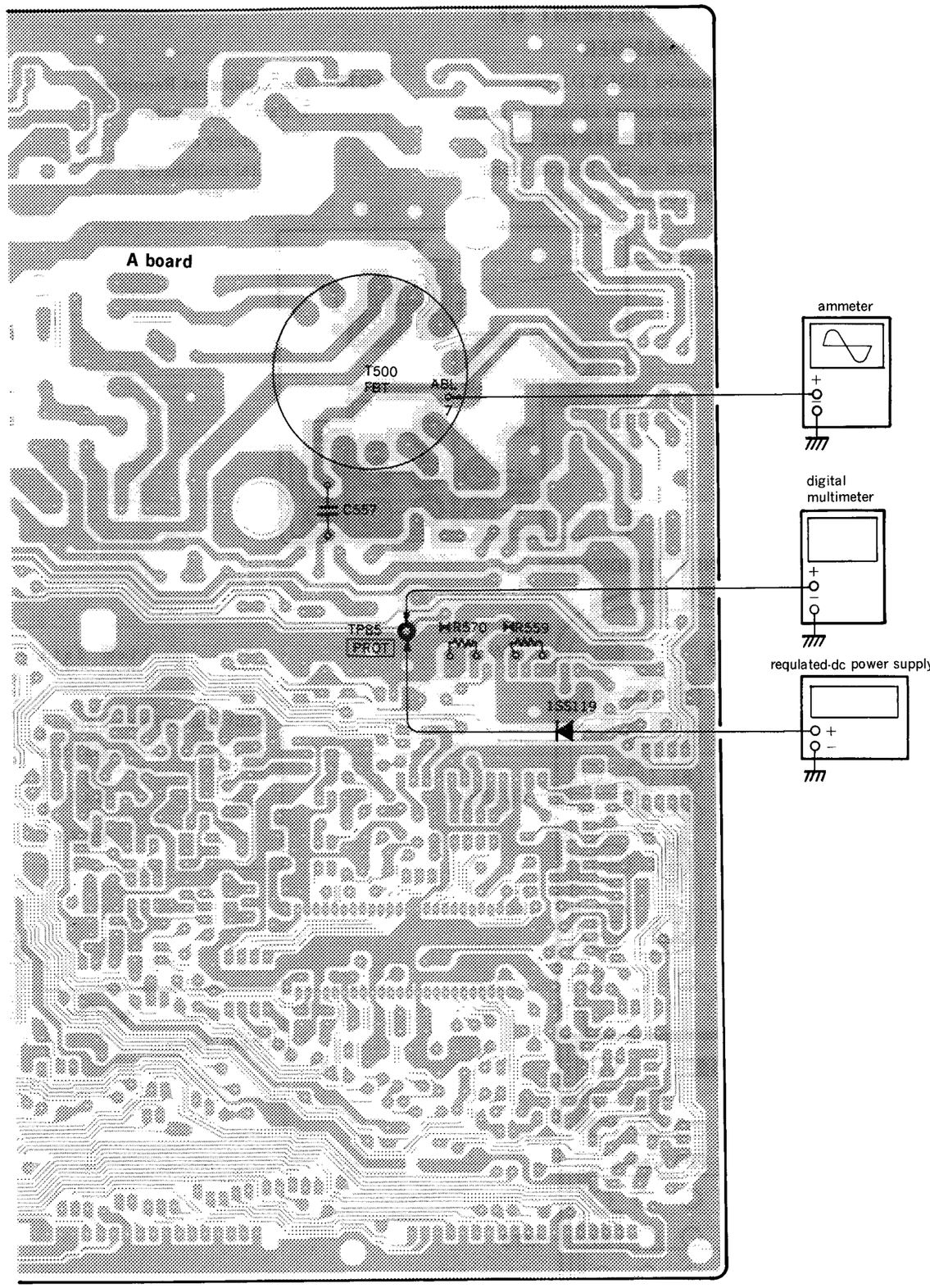
G BOARD

B+ VOLTAGE CONFIRMATION

The following adjustments should always be performed when replacing IC653 and R675.

1) Supply $130^{+1.0}_{-0}$ V AC to with variable autotransformer.
2) Input an entirely monoscope signal.
3) Set the PICTURE control and the BRIGHT controls in to initial reset.
4) Confirm the voltage of TP91 is less than 137.0V DC.
5) If step 4) is not satisfied, replace IC653 and R675 repeat above steps.





SECTION 5
CIRCUIT ADJUSTMENTS

5-I. ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

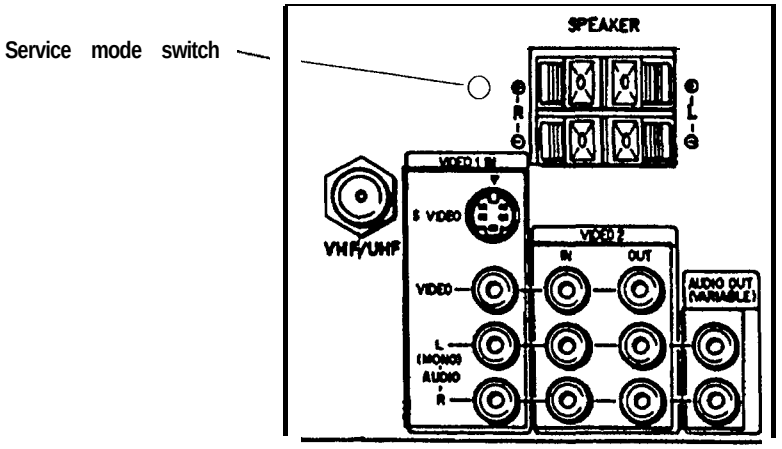
Use of Remote Commander (RM-Y 111) can be performed circuit adjustments about this model.

1. METHOD OF SETTING THE SERVICE MODE

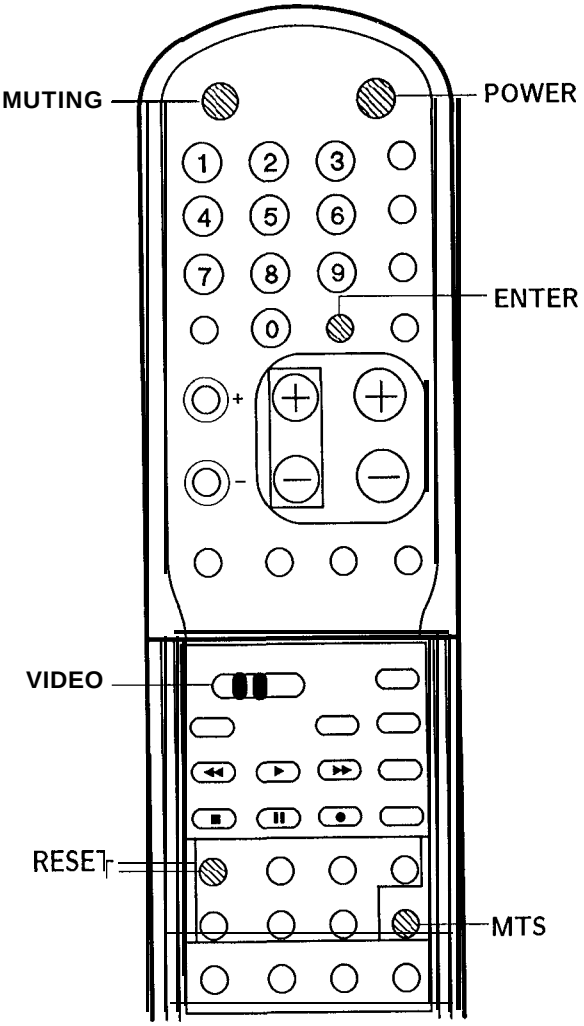
1) Press POWER button on the Remote Commander while pressing switch on the rear of the set.

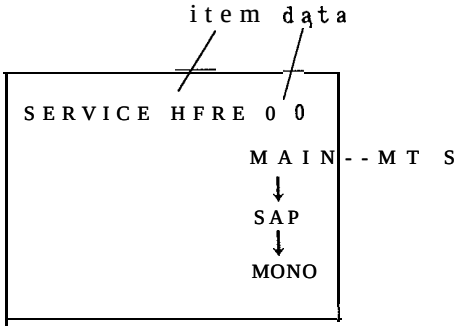
NOTE : Test Equipment Required.

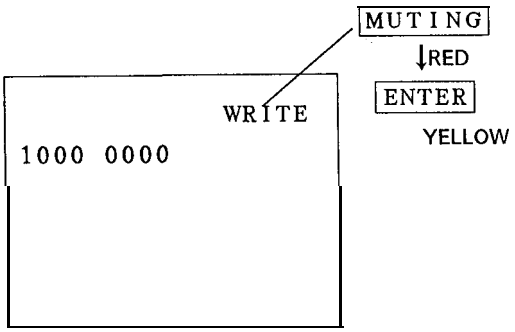
1. Pattern Generator
2. Frequency counter
3. Digital multimeter
4. Audio OSC



2. ADJUST BUTTONS AND INDICATOR







3. AN ITEM OF ADJUSTMENT

ITEM	EFERENCE ATA	NAME REGIST	
IHFRE	44	√P	1-FREQUENCE1
VFRE	09	√P	J-FREQUENCE 1
VPOS	10	√P	J-SHIFT
VSIZ	1D	√P	J-SIZE
VLIN	07	√P	J-LINEARITY
Vsco	08	√P	;-CORRECTION
HPOS	07	√P	i-PHASE
HSIZ	11	√P	i-SIZE
PAMP	OF	√P	'IN AMP.
CPIN	04	√P	CORNER PIN
PPHA	07	VP	'IN PHASE
VCOM	02	VP	√-COMP
GAMP	17	VP	GREEN AMP.
BAMP	18	VP	BLUE AMP.
GCUT	OD	VP	GREEN CUT OFF
BCUT	09	VP	BLUE CUT OFF
CROM	1B	VP	CHROMA TRAP
SPIX	33	VP	PICTURE
SHUE	23	VP	HUE
SCOL	1C	VP	COLOR
SBRT	3F	VP	BRIGHT
RGBP	1E	VP	RGB PICTURE
MPX	08	AP	ATT
FILO	1B	AP	I1
DEEM	07	AP	I2
STEV	21	AP	OSC1
SAPV	1F	AP	osc2
PILO	08	AP	PILOT
SEP	1B	AP	WIDE BAND
VD	0A	AP	SPECTRAL
LVOL	00	AP	VOLUME-L
RVOL	00	AP	VOLUME-R
SHAR	07	VP	SHARPNESS
DISP	37	VP	PWM OUTPUT

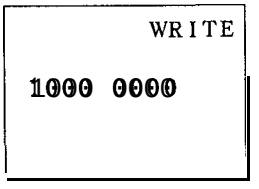
4. METHOD OF CANCELLATION FROM SERVICE MODE

Set the standby condition (Press POWER button on the commander) in the next place, press POWER button again, hereupon it becomes TV mode.

5. METHOD OF WRITE FOR MEMORY

1) Set to Service Mode.
2) Press 1 (UP) and 4 (DOWN), select an item of adjustments.
3) Press MUTING button indicate WRITE) on screen.
4) Press ENTER button to write for memory. (At this time WRITE (YELLOW) is indicated on screen.)

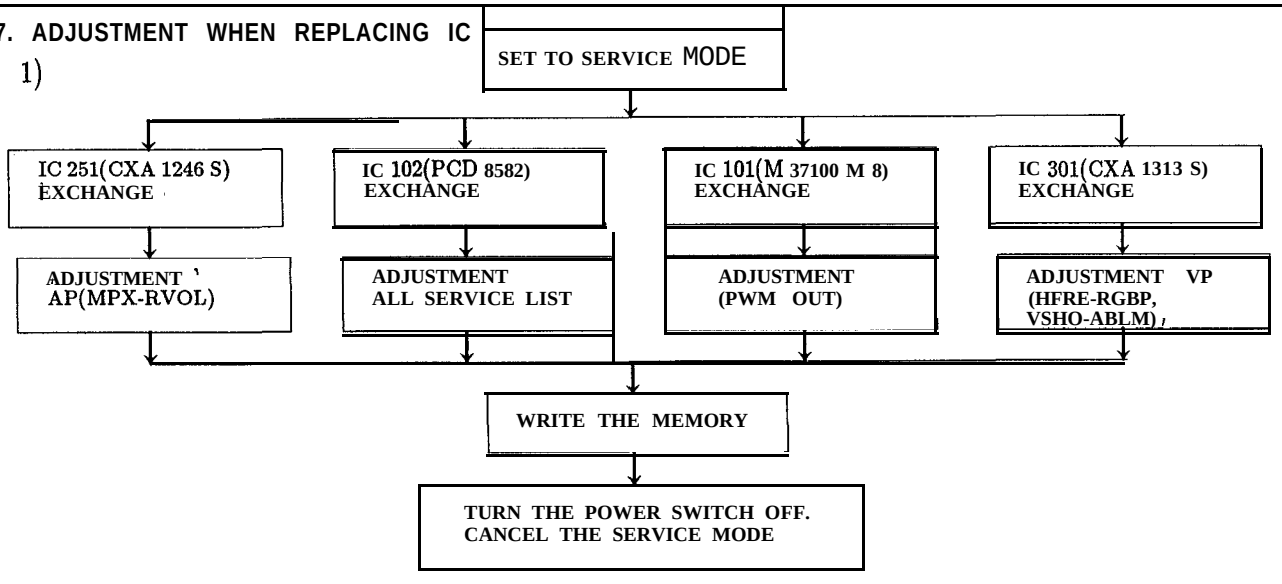
6. MEMORY WRITE CONFIRMATION METHOD



1) After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again, confirm they were adjusted.

7. ADJUSTMENT WHEN REPLACING IC

1)


SET TO SERVICE MODE
IC 251(CXA 1246 S) EXCHANGE
IC 102(PCD 8582) EXCHANGE
IC 101(M 37100 M 8) EXCHANGE
IC 301(CXA 1313 S) EXCHANGE
ADJUSTMENT AP(MPX-RVOL)
ADJUSTMENT ALL SERVICE LIST
ADJUSTMENT (PWM OUT)
ADJUSTMENT VP (HFRE-RGBP, VSHO-ABLM)
WRITE THE MEMORY
TURN THE POWER SWITCH OFF. CANCEL THE SERVICE MODE

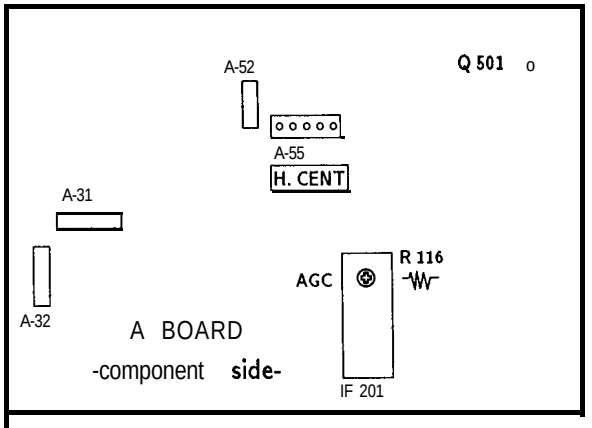
NOTE : If service mode is canceled before writing into memory, the adjustment data is not recorded.
Please write into memory, after adjustment.

2) The following initial setting should always be performed when replacing the IC 102 (PCD 8582).

ITEM	NAME	REGISTER	ADJUSTMENT
VSOM	VP	VSMO	0
AFC	VP	AFC 1.0	0
REF	VP	REF 1.0	2
ROFF	VP	OFF NR	1
GOFF	VP	OFF NG	1
BOFF	VP	OFF NB	1
ABLM	VP	ABLM	1
TEST	AP	T	0
DRGB	VP	DRGB	1

*Please with the memory each items by pressing MUTING → and then press ENTER.

5-2. A BOARD ADJUSTMENTS



RF AGC ADJUSTMENT(IF BLOCK VR)

1) Input a color-bar signal.
2) Adjust AGC VR of IF 201 so that snow noise and cross-modulation disappear from the picture.
3) Confirm them at every channel.

H.FREQUENCY ADJUSTMENT (HFRE)

1) Set to Service Mode.
2) Input a color-bar signal.
3) Connect a frequency counter to base of Q 501.
4) Call the item of AFC, set to 3 level (free run).
5) Select HFRE with 1 and 4.
6) Adjut 3 and 6 to the 15735 ± 60 Hz level.
7) Call the item of AFC again, adjust the level" 00 ".
8) Write into the memory by pressing MUTING then ENTER.

V.FREQUENCY ADJUSTMENT (VFRE)

1) Set the Service Mode.
2) Input an off-air signal (VIDEO IN → no signal).
3) Connect the frequency counter across connector VDY ⊕ of A-52 connector and ground.
4) Select VFRE with 1 and 4.
5) Adjust 3 and 6 to the 56 ±0.5 Hz.
6) Write the memory by pressing MUTING → then ENTER.

CHROMA TRAP ADJUSTMENT (CROM)

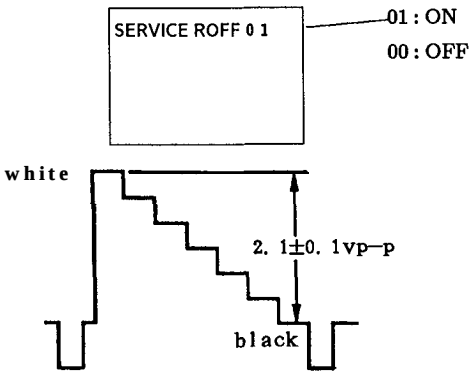
1) Set to Service Mode.
2) Input a color-bar signal.
3) Select NOTCH (VIDEO condition), turn ON by press-ing . And then set the COLOR VR to maximum set-ting position and SHARPNESS control to center.
4) Connect an oscilloscope to pin ① of A-32 connector and ground.
5) Select C ROM with 1 and 4, and then adjust 3.58 MHz (CHROMA) ingredient is minimum with 3 and 6.
6) Write into the memory by pressing MUTING → then ENTER.
7) Set NOTCH to OFF, and make normal condition with VIDEO → then RESET.

SUB CONTRAST ADJUSTMENT (SPIX)

1) Set to Service Mode.
2) Input a color-bar signal. (75 IRE)
3) Set the conditions as follows.

PICTURE	·····	MAX
COLOR	·····	MIN
R OFF	·····	ON
G OFF	·····	OFF
B OFF	·····	OFF

Press [VIDEO] → then [-] (L) (It becomes minimum) .
Select [3] (ON) and [6] (OFF) with [1] and [4].

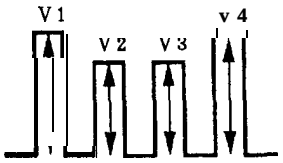


4) Connect an oscilloscope to pin ① of connector A-32 and ground.
5) Adjust [3] and [6] to the 1.7 ± 0.1Vp-p level by select-ing SPIX with [1] and [4].
6) Write the memory by pressing [MUTING] → then [ENTER]
7) Return the following back to normal after adjustment.

G OFF	·····	ON
B OFF	·····	ON
COLOR	·····	CENTER
PICTURE	·····	80%

SUB HUE, SUB COLOR ADJUSTMENT (SHUE, SCOL)

1) Input a color-bar signal.
2) Press [VIDEO] → then [RESET] to normal.
3) Set to Service Mode.
4) Connect an oscilloscope to pin ③ of connector A-32 and ground.
5) Adjust [3] and [4] to the V1=V4 and V2=V3 by select to SHUE and SCOL with [1] and [4].



6) Write into the memory by pressing [MUTING] →then [ENTER]

V.SIZE ADJUSTMENT (VSIZ)

1) Set to Service Mode.
2) Press [VIDEO] → then [RESET] to normal.
3) Input a cross-hatch signal.
4) Adjust [3] and [6] to the best vertical size by selecting VSIZ with [1] and [4] .
5) Write into the memory by pressing [MUTING] →then [ENTER] .

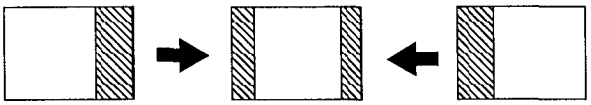
H.SIZE ADJUSTMENT (HSIZ)

1) Input a cross-hatch signal.
2) Press [VIDEO] → then [RESET] to normal.
3) Set to Service Mode.
4) Adjust [3] and [6] to best horizontal size by selecting HSIZ with [1] and [4].
5) Write into the memory by pressing [MUTING] →then [ENTER] .

H.CENTER ADJUSTMENT (H POS)

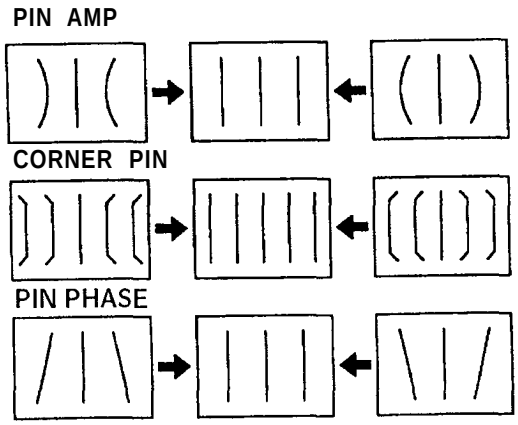
Note: Perform this adjustment after H.FREQUENCY ADJUSTMENT (HFRE) .

1) Input a color bar signal.
2) Set the Service mode.
3) Select HSIZ with 1 and 4 .
4) Press 6 so that the Horizontal size set to min.
5) Adjust A-55 conector position so that both-size branking width of the Raster should be same on the Scrnne.
6) Unplug Set then plug in Set.
7) Set to Service mode.
8) Select HPOS with 1 and 4 .
9) Adjust 3 and 6 so that the color bars center should be set to the CRT Screen center position.
10) White into the memory by the pressing-1 → then ENTER .



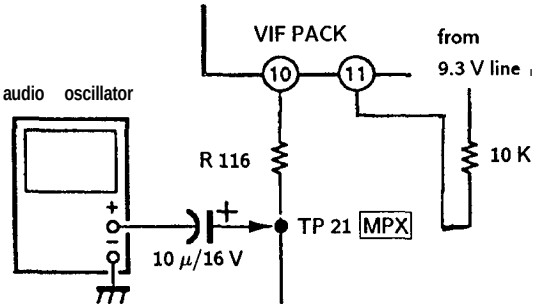
PIN AMP (PAMP) , CORNER PIN (CPIN) AND PIN PHASE (PPHA) ADJUSTMENT

1) Input a cross-hatch signal.
2) Press VIDEO → then RESET to a l .
3) Set to Service Mode.
4) Select PAMP, CPIN and PPHA with 1 and 4.
5) Adjust 3 and 6 to the best picture.
6) Write the memory by MUTING T→ E R] .



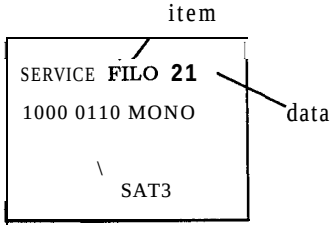
FILTER ADJUSTMENT (MPX, FILO)

1) Set to Service Mode.
2) Select to TEST with 1 and 4, set the data to "1". Then select MPX and change data to "08" .
3) Connect an audio oscillator to R116 using a capacitor (10μ F/16V), set frequency to 62.936 kHz±0.1 kHz.
And then, through the 10kΩ resistor, feed 9.3V into the pin ⑪ of VIF pack.



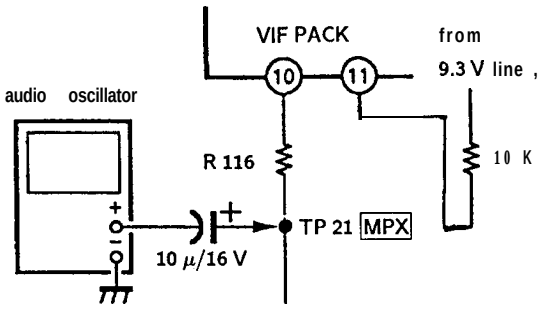
V 4fh : SINE-WAVE 62.936 KHz±0.1 KHz
LEVEL 3.0 Vp-p

4) Make the data "00" by selecting FILO with 1 and 4 And then, send up the data gradually by pressing 6 . Set the data to D1 before SAT3 changing to 1 from 0.
5) Send up the data gradually. Set data D2 when SAT3 changes 0 from 1.
6) Adjust the data of FILO to $\frac{D1 + D2}{2}$.
7) Write into the memory by pressing-1 then ENTER .



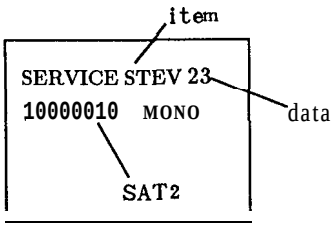
ST VCO ADJUSTMENT (MPX, STEV)

1) Set to Service Mode.
2) Select TEST with 1 and 4, set the data to "1". And then press MTS to MONO.
3) Select MPX, set the data "8" .
4) Connect an audio oscillator to R 116 using electrolytic capacitor (10μ F/16V) and appply the frequency VST. Then, apply DC voltage to pin ⑪ of VIF pack using 10kΩ connect to 9.3V line.



V 4 fh : SINE-WAVE 62.936 KHz ± 0.1 KHz
LEVEL 3.0 Vp-p

5) Select STEV with 1 and 4, set the data to "00" with 6. And then, send up the data gradually. Set the data to D1 before SAT2 changes from 0 to 1.
6) Send up data gradually, set the data to D2 when SAT2 changes 1 from 0.
7) Adjust the data of STEV to .
8) Write into the memory by pressing MUTING → then ENTER.



MPX IN LEVEL ADJUSTMENT (MPX)

1) Set to Service Mode.
2) Select TEST with 1 and 4, set the data to "0" with 6. And then press MTS to MONO.
3) Select MPX with 1 and 4, set the data to "08" with 3 and 6.
4) Write into the memory by pressing MUTING → then ENTER.

[PILOT CANCEL ADJUSTMENT (PILO)

1) Set to the Service Mode.
2) Select TEST with 1 and 4, set the data to "0" with 6. And then press MTS to MAIN.
3) Select PILO with 1 and 4, set the data to "08" with 3 and 6.
4) Write into the memory by pressing MUTING → then ENTER.

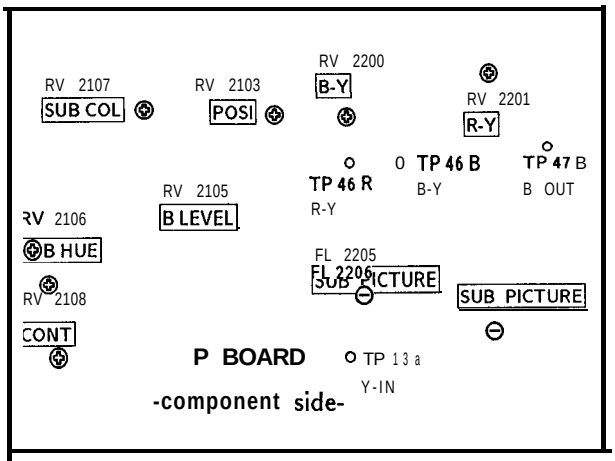
SAP VCO f (ADJUSTMENT (SAPV)

1) Set to Service Mode.
2) Input a stereo broadcast signal with SAP.
3) Select TEST with 1 and 4, set the data to "0" . And then, press MTS to MAIN.
4) Connect a digital multimeter to TP-1(DBX). This voltage reading will equal V 1.
5) Press MTS to SAP and this voltage will equal V 2.
6) Select SAPV with 1 and 4, adjust 3 and 6 so that V 2=V 1±0.03 VDC.
7) Write the memory by ENTER → _____.

SEPARATION ADJUSTMENT (SEP)

1) Set to Service Mode.
2) Press MTS to MAIN and receive a monoral broad -cast signal.
In the next step, receive a stereo broadcast signal.
3) Select SEP and VD with 1 and 4, adjust 3 and 6 so that a clear stereo sound is effected.

5-3. P BOARD ADJUSTMENTS

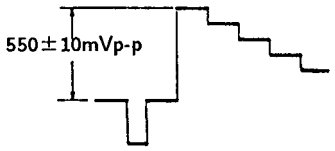


[RF AGC ADJUSTMENT(IF BLOCK VR)

1) Input a color-bar signal.
2) Set to PICTURE IN PICTURE mode.
3) Adjust AGC VR of IF 1201 so that snow noise and cross-modulation disappear from the picture.
4) Confirm them at every channel.

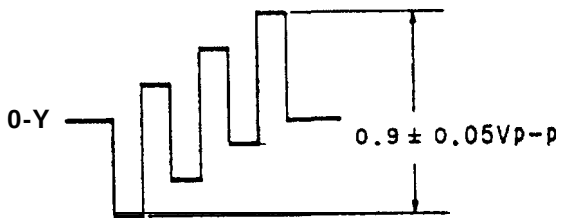
CONTRAST ADJUSTMENT(RV 2108)

1) Input a color-bar signal.
2) Set to PICTURE IN PICTURE mode.
3) Observe signal at TP-13 a an oscilloscope.
4) Adjust RV 2108 (SUB CONT) so that the signal level between white and pedestal becomes 550 ± 10 mVp-p as shown.



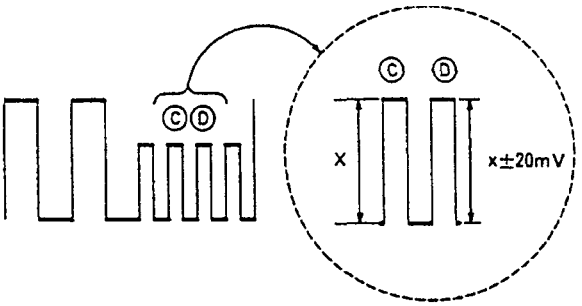
SUB COLOR ADJUSTMENT(RV 2107)

1) Input a color-bar signal.
2) Set to PICTURE IN PICTURE mode.
3) COLOR ····· RESET
   HUE ····· RESET
4) Connect an oscilloscope to TP-47 B.
5) Adjust RV 2107 so that voltage is 0.9 ±0.05 Vp-p.



SUB HUE ADJUSTMENT(RV 2106)

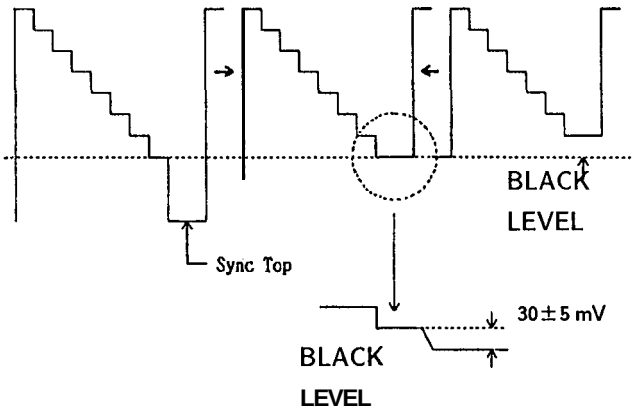
1) Input a color-bar signal.
2) Set to PICTURE IN PICTURE mode.(1/4 SIZE)
3) PICTURE ····· 80%
   BRIGHT ····· RESET
   COLOR ····· RESET
   HUE ····· RESET
4) Connect an oscilloscope to TP-47 B.
5) Adjust RV2106 so that the Ⓒ coincides with Ⓓas shown in figure.



[BRT LEVEL ADJUSTMENT(RV 2105)

1) Input a color-bar signal.
2) Observe PICTURE IN PICTURE mode.
3) Adjust RV 2105(B.LEVEL)so that the signal level between C.B.black level and Sync level becomes same level as shown.

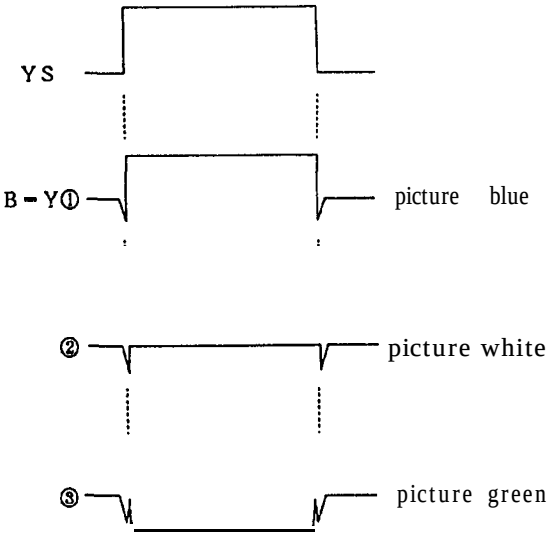
TP-13 a output



A/D OFF SET ADJUSTMENT(RV 2200,2201)

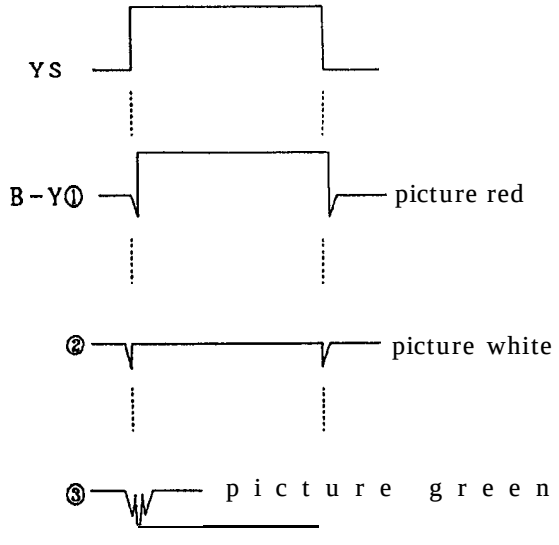
B-Y ADJUSTMENT

1) Input a color-bar signal.
2) Set to PICTURE IN PICTURE mode.
3) Connect an oscilloscope to TP-46 B.
4) Adjust RV 2200 so that the wavefront as shown in figure.



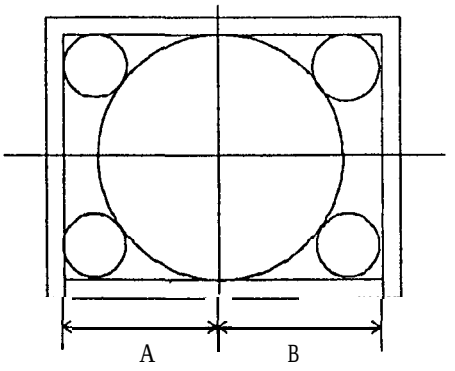
R-Y ADJUSTMENT

1) Input a color-bar signal.
2) Set to PICTURE IN PICTURE mode.
3) Connect an oscilloscope to TP-46 R.
4) Adjust RV 2201 so that the wavefront as shown in figure.



SUB PICTURE ADJUSTMENT(FL 2205,2206)

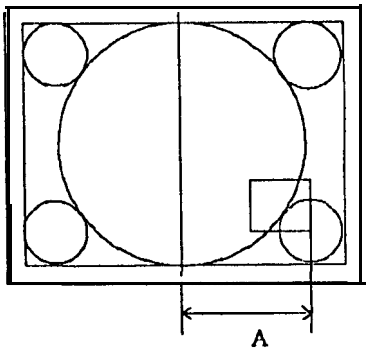
1) Input a monoscope signal.
2) Set to PICTURE IN PICTURE mode.
3) Adjust FL2205,FL2206 so that A and B are same size.



FL-2205=B side
FL-2206=A side

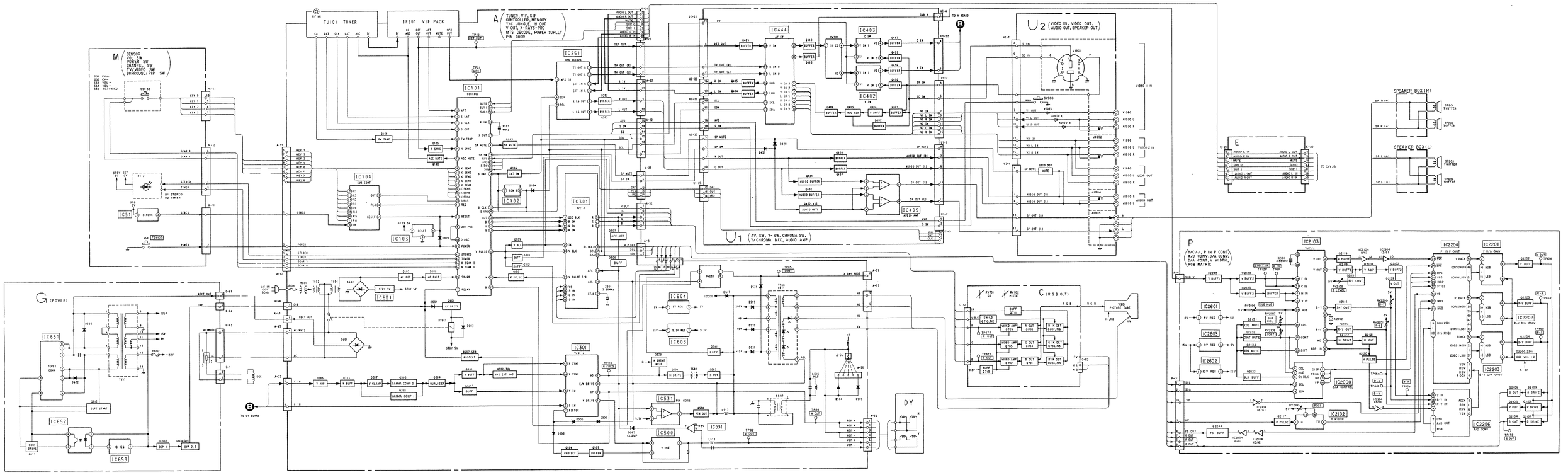
[SUB PICTURE POSITION ADJUSTMENT(RV 2103)

1) Input a cross-hatch signal.
2) Set to PICTURE IN PICTURE mode.
3) Adjust RV 2103 so that the SUB PICTURE is a suitable position.

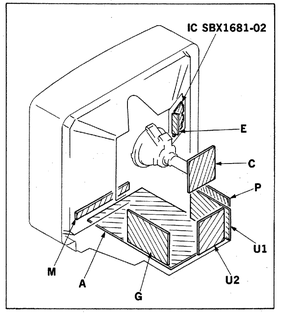


SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM


TU101 TUNER
IF201 VIF PACK
A (TUNER, VIF, SIF CONTROLLER, MEMORY Y/C JUNGLE, R OUT V OUT, X-RAYS-PRO MTS DECODE, POWER SUPPLY PIN CORR)
M (SENSOR SW, POWER SW, CHANNEL SW, TV/VIDEO SW, SURROUND/PIP SW)
U1 (AV, SW, Y-SW, CHROMA SW, Y/CHROMA MIX, AUDIO AMP)
U2 (VIDEO IN, VIDEO OUT, AUDIO OUT, SPEAKER OUT)
C (RGB OUT)
E
P (Y/C / J, P IN P CONT, A/D CONV, D/A CONV, D/A CONV IN WIDTH, RGB MATRIX)
G (POWER)
IC101 CONTROL
IC104 SUB CONT
IC251 MTS DECODE
IC301 Y/C 2
IC444 AV SW
IC403
IC402 Y SW
IC405 AUDIO AMP
IC2103 Y/C 4
IC2000 D/A CONTROL
IC2102 H WIDTH
IC2206 A/D CONV
IC2201 A/D CONV
IC2202 R-Y D/A CONV
IC2203 B-Y D/A CONV
IC2204 D/A CONV
IC2205 D/A CONV
IC651
IC652
IC653
IC531 PIN CORR
IC500
SPEAKER BOX (R)
SPEAKER BOX (L)
TO A BOARD
TO U1 BOARD
TO CNY-25

6-2. CIRCUIT BOARDS LOCATION



6-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS – Conductor Side –

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms. kΩ =1000Ω , MΩ =1000KΩ
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm
Rating electrical power ¼ W

- : nonflammable resistor.
- △ : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth-ground.
- ⏚ : earth-chassis.
- The components identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.Should replacement be required, replace only with the value originally used.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

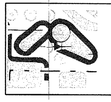
- When replacing components identified by ◪ mark the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⊠ and repeat the adjustment until the specified value is achieved. (Refer to R570, R559 adjustment on page 28-30)
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced (◪)	Adjustment (⊠)
PM501, Q607, Q608, R559, R627, R628, R629	R559 Hold-down
PM501, Q607, Q608, D531, C545, R570, R591, R627, R628, T500 IC653: R575	R570 Hold-down

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

- Readings are taken with a color-bar signal input.
- Readings are taken with a 10MΩ digital maltimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage varietions may be neted due to normal production tolerances.
- All voltages are in V.
- Circuled numbers are waveform references.
- : B+ bus.
- : signal path.



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

KV-27EXR95 KV-27EXR95
RM-Y111 RM-Y111

A [TUNER, VIF, SIF, CONTROLLER, MEMORY, Y/C JUNGLE, H OUT, V OUT, X-RAYS-PRO, MTS DECODE, POWER SUPPLY, PIN CORR]

—A Board—

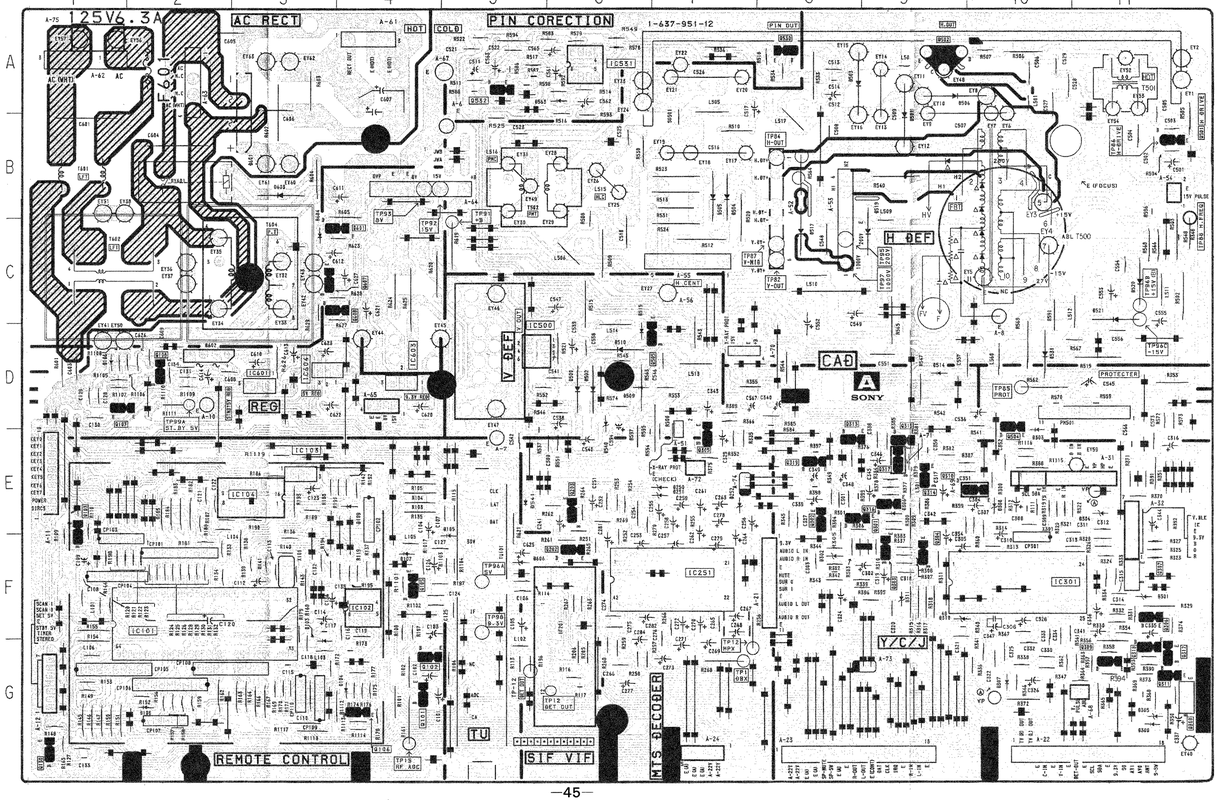
IC	
IC101	F-2
IC102	F-4
IC103	E-3
IC104	E-3
IC251	F-7
IC301	F-10
IC500	D-5
IC531	A-6
IC601	D-3
IC603	D-4
IC604	D-3

TRANSISTOR	
Q101	G-4
Q102	G-4
Q103	E-1
Q105	F-4
Q106	G-4
Q107	D-1
Q108	D-2
Q130	G-1
Q202	F-6
Q203	E-6
Q301	E-8
Q302	E-8
Q303	F-9
Q304	F-9
Q305	E-7
Q306	F-11
Q307	F-11
Q308	G-11
Q309	G-11
Q310	E-10
Q311	G-11
Q312	G-11
Q313	E-8
Q314	E-9
Q315	E-9
Q316	E-9
Q317	D-9
Q318	G-11
Q501	B-11
Q502	A-9
Q504	E-10
Q505	D-5
Q530	A-8
Q601	C-3
Q607	C-3
Q608	C-3

DIODE	
D103	G-3
D104	G-4
D105	F-6
D106	D-1
D107	F-4
D108	G-2
D109	E-4
D250	E-7
D251	E-7
D252	E-7
D300	G-11
D301	F-11
D302	F-8
D303	E-10
D304	E-11
D305	G-11
D306	E-9
D307	G-10
D308	E-10
D310	F-9
D311	F-9
D500	D-6
D501	A-9
D502	D-6
D503	A-8
D504	B-7
D505	B-7
D506	A-9
D507	
D509	D-6
D510	D-6
D514	D-9
D515	D-6
D517	C-8
D519	C-9
D520	C-11
D521	C-11
D531	D-10
D540	E-6
D563	A-6
D601	B-3
D602	D-2
D603	B-3
D604	C-3
D606	F-5

TEST POINT	
TP1	G-7
TP2	G-7
TP12	G-7
TP15	G-4
TP82	C-8
TP84	B-8
TP85	D-10
TP87	C-8
TP88	B-12
TP91	C-5
TP92	B-4
TP93	B-4
TP95	C-8
TP96A	F-5
TP96B	C-11
TP96C	C-11
TP97	C-8
TP98	F-5
TP99A	D-2

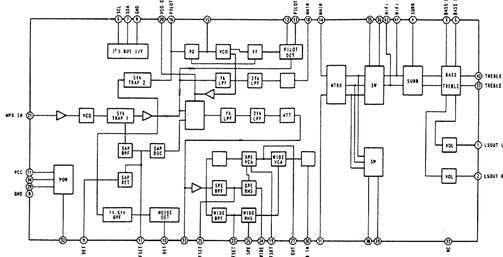
—A Board—



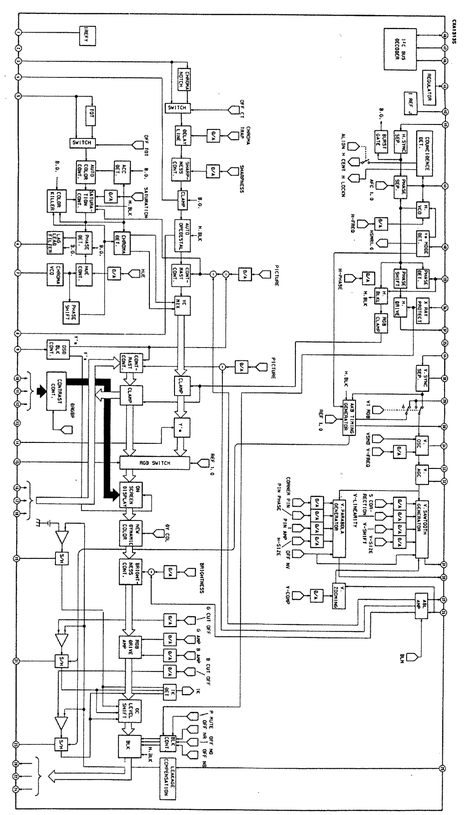
• A Board

① 4.0Vp-p (H)	② 1.1Vp-p (V)	③ 5.2Vp-p(4MHz)
④ 5.1Vp-p (V)	⑤ 16Vp-p(V)	⑥ 1.9Vp-p (H)
⑦ 4Vp-p (H)	⑧ 3.2Vp-p (H)	⑨ 3.2Vp-p (H)
⑩ 0.75Vp-p (V)	⑪ 1.5Vp-p (V)	⑫ 4.5Vp-p (H)
⑬ 6Vp-p (H)	⑭ 180Vp-p (H)	⑮ 900Vp-p (H)
⑯ 3.2Vp-p ( )	⑰ 17Vp-p (H)	⑱ 6.8Vp-p (V)
⑲ 15Vp-p (V)	⑳ 54Vp-p (V)	㉑ 32Vp-p (V)

A Board IC251 CXA1264AS



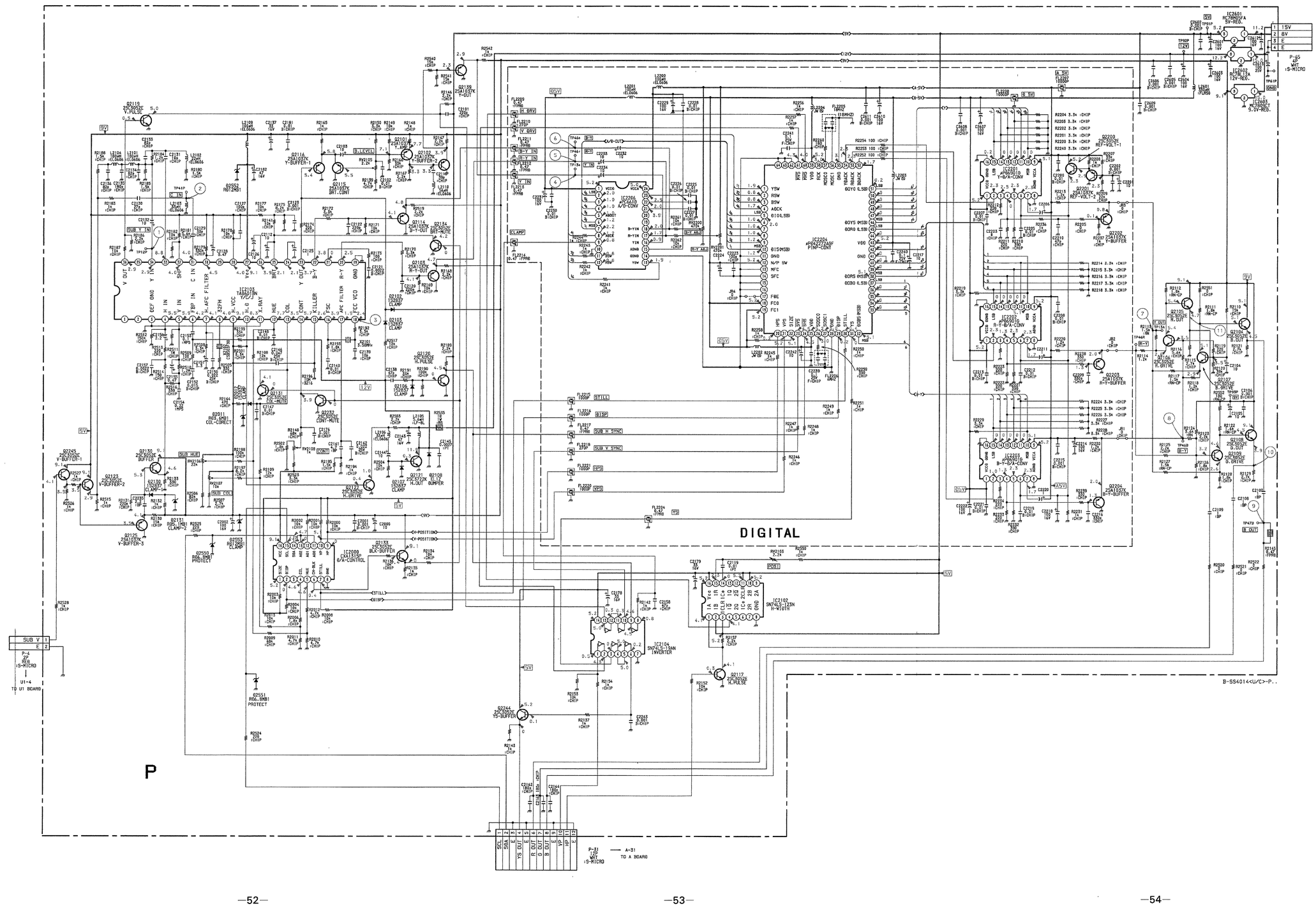
A Board IC301 CXA1313S



A

TUNER, VIF, SIF
CONTROLLER, MEMORY
Y/C JUNGLE, H OUT
V OUT, X-RAYS-PRO
MTS DECODE, POWER SUPLLY
PIN CORR

B-SS4014<CU/C>-A..

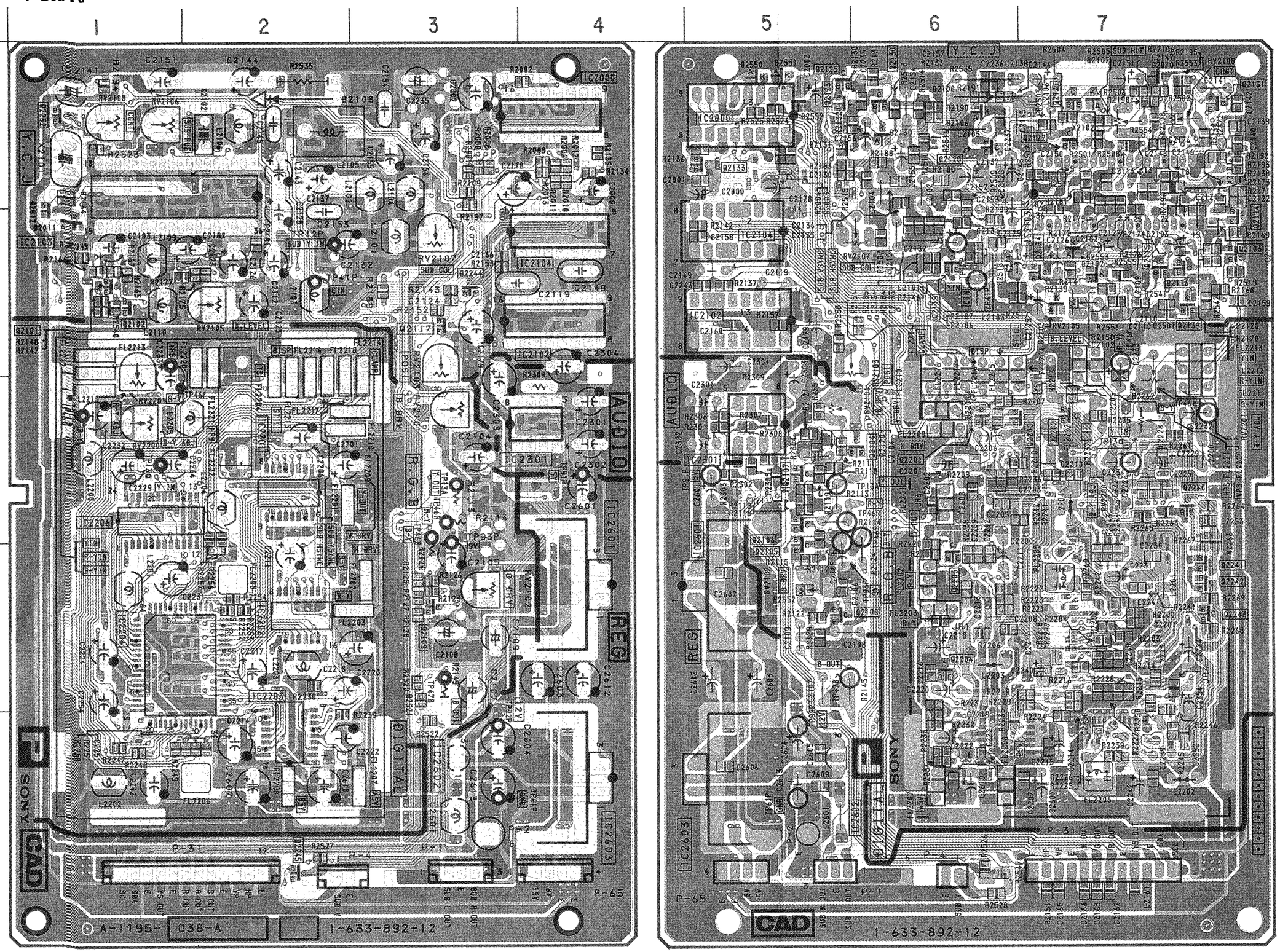


● P Board

① 0.8Vp-p (H)	② 0.48Vp-p (H)	③ 1.1Vp-p(3.58MHz)
④ 0.8Vp-p (H)	⑤ 0.4Vp-p (H)	⑥ 0.36Vp-p (H)
⑦ 0.8Vp-p (H)	⑧ 0.85Vp-p (H)	⑨ 0.9Vp-p (H)
⑩ 0.9Vp-p (H)	⑪ 1.4Vp-p (H)	

P

—P Board—



—P Board—

IC	
IC2000	A-5
IC2102	B-5
IC2103	A-7
IC2104	B-5
IC2201	C-2
IC2202	D-2
IC2203	E-2
IC2204	D-1
IC2206	C-1
IC2601	D-5
IC2602	E-5
IC2603	E-5

TRANSISTOR	
Q2101	B-1
Q2102	B-1
Q2103	B-7
Q2104	C-6
Q2105	D-6
Q2106	C-5
Q2107	C-5
Q2108	D-5
Q2109	D-3
Q2114	B-7
Q2115	B-7
Q2116	B-7
Q2117	B-3
Q2119	B-6
Q2120	A-6
Q2121	A-7
Q2122	A-7
Q2123	A-5
Q2125	A-5
Q2130	A-6
Q2131	A-7
Q2133	A-5
Q2134	B-7
Q2139	B-7
Q2200	C-6
Q2201	C-6
Q2202	C-7
Q2203	D-6
Q2204	D-6
Q2232	A-1
Q2244	B-3
Q2245	E-2

DIODE	
D2011	B-1
D2012	A-1
D2102	B-7
D2103	B-7
D2106	A-6
D2107	A-7
D2108	A-6
D2130	A-6
D2131	A-5
D2550	A-5
D2551	A-5
D2552	A-5
D2553	B-7

VARIABLE RESISTOR	
RV2103	B-5
RV2105	B-7
RV2106	A-7
RV2107	B-6
RV2108	A-5
RV2200	C-7
RV2201	C-7

TEST POINT	
TP12	B-6
TP13A	C-5
TP13a	C-7
TP41P	B-6
TP46B	C-6
TP46R	C-5
TP46b	C-7
TP46r	B-7
TP47B	D-5
TP61P	E-5
TP91P	C-5
TP92P	E-5
TP93P	D-5

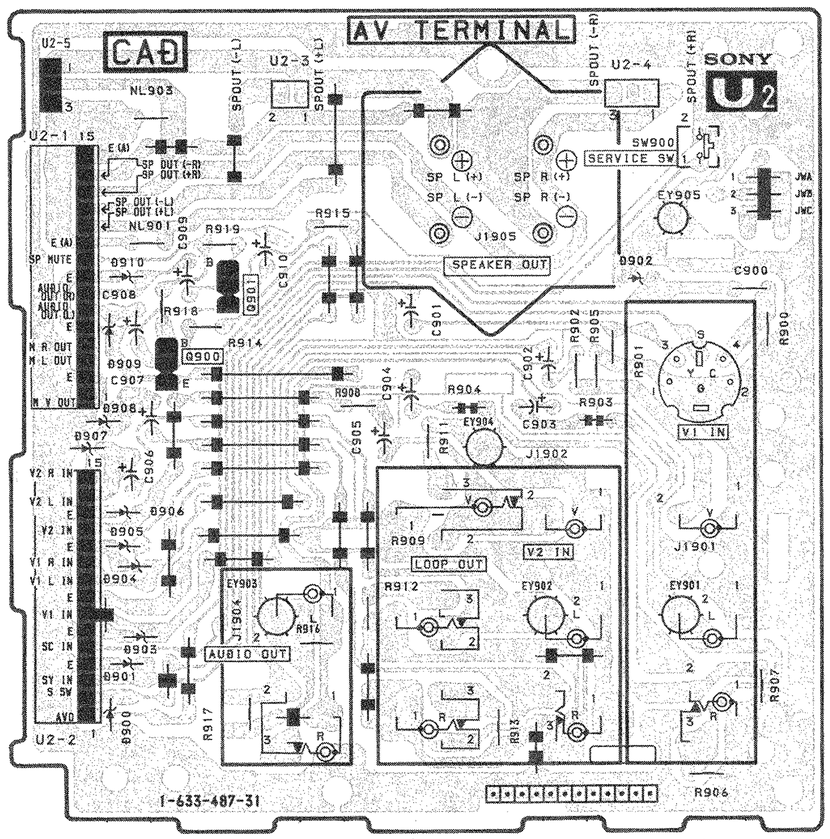
U2 [VIDEO IN, VIDEO OUT, AUDIO OUT, SPEAKER OUT]

U1 [AV. SW, Y-SW CHROMA SW, Y/CHROMA SW, AUDIO AMP]

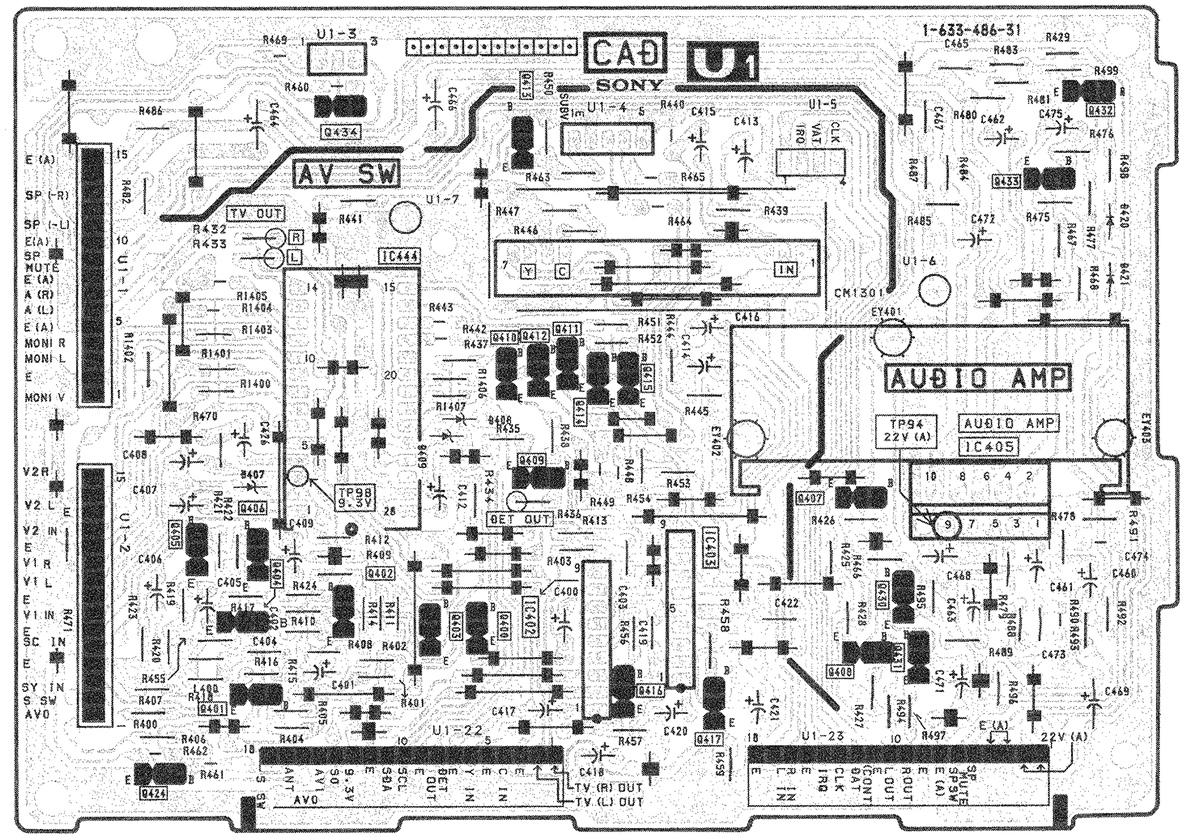
M [SENSOR, VOL SW, POWER SW, CHANNEL SW, TV/VIDEO SW, SURROUND/PIP SW]

E

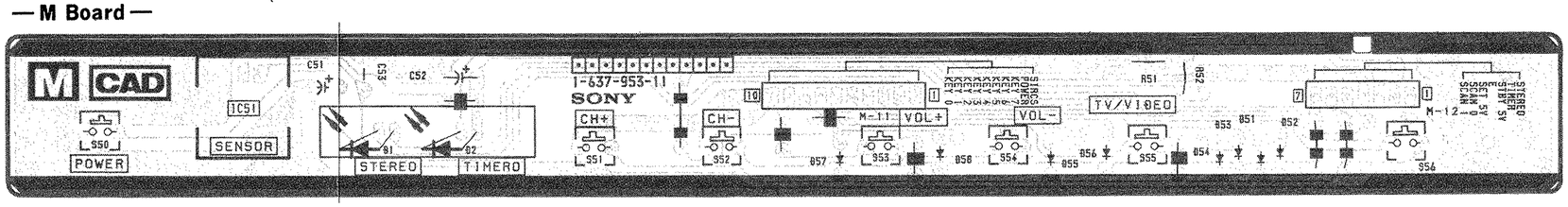
—U2 Board —



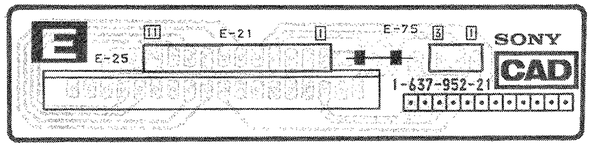
—U1 Board —



—M Board —

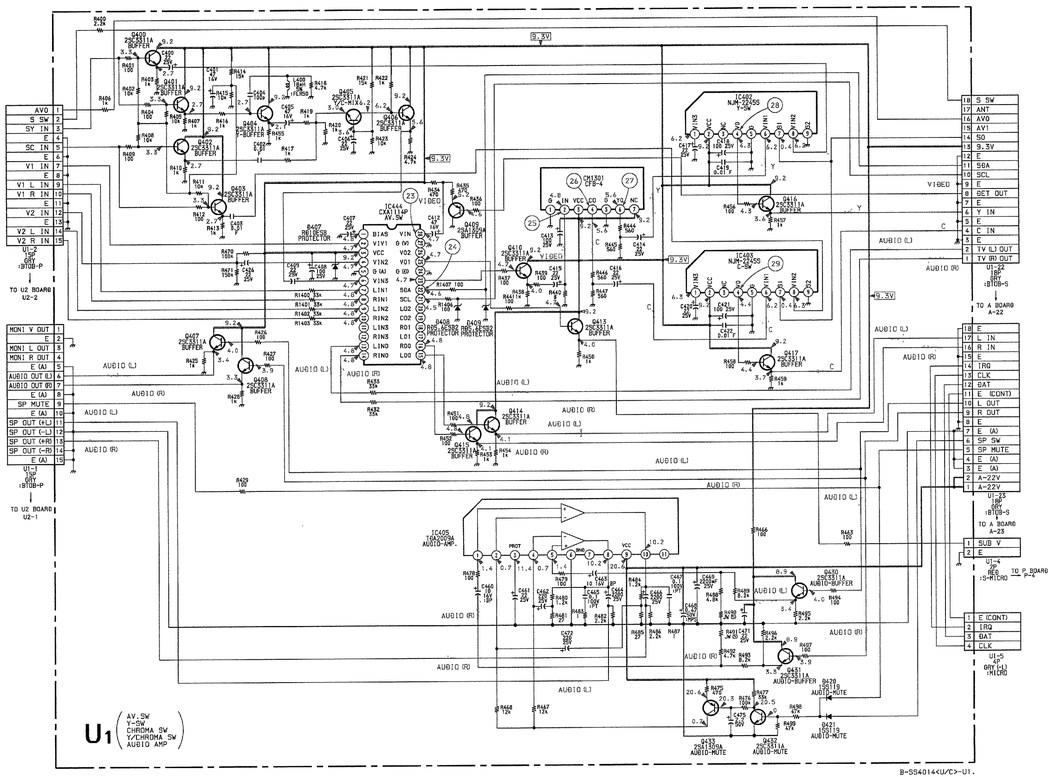


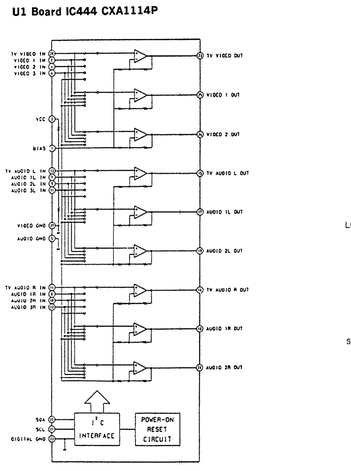
—E Board —



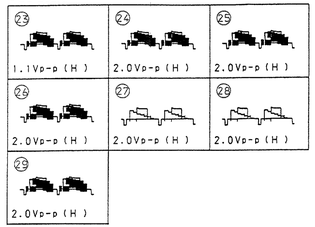
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

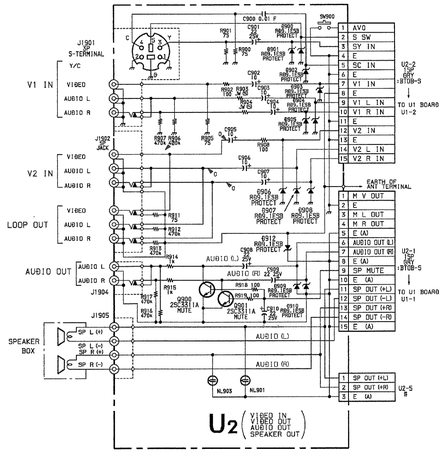
KV-27EXR95 RM-Y111 KV-27EXR95 RM-Y111

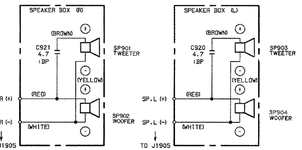


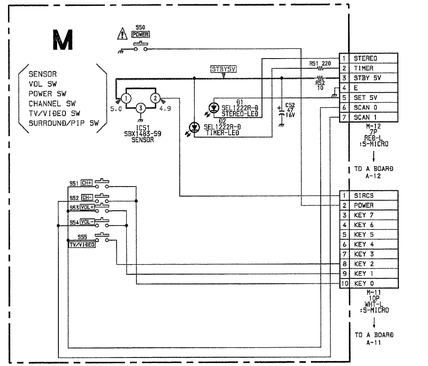


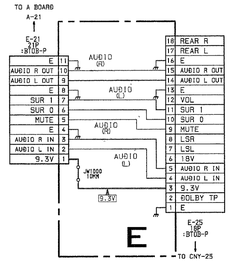
● U1 Board



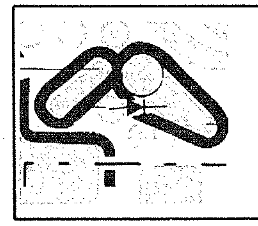




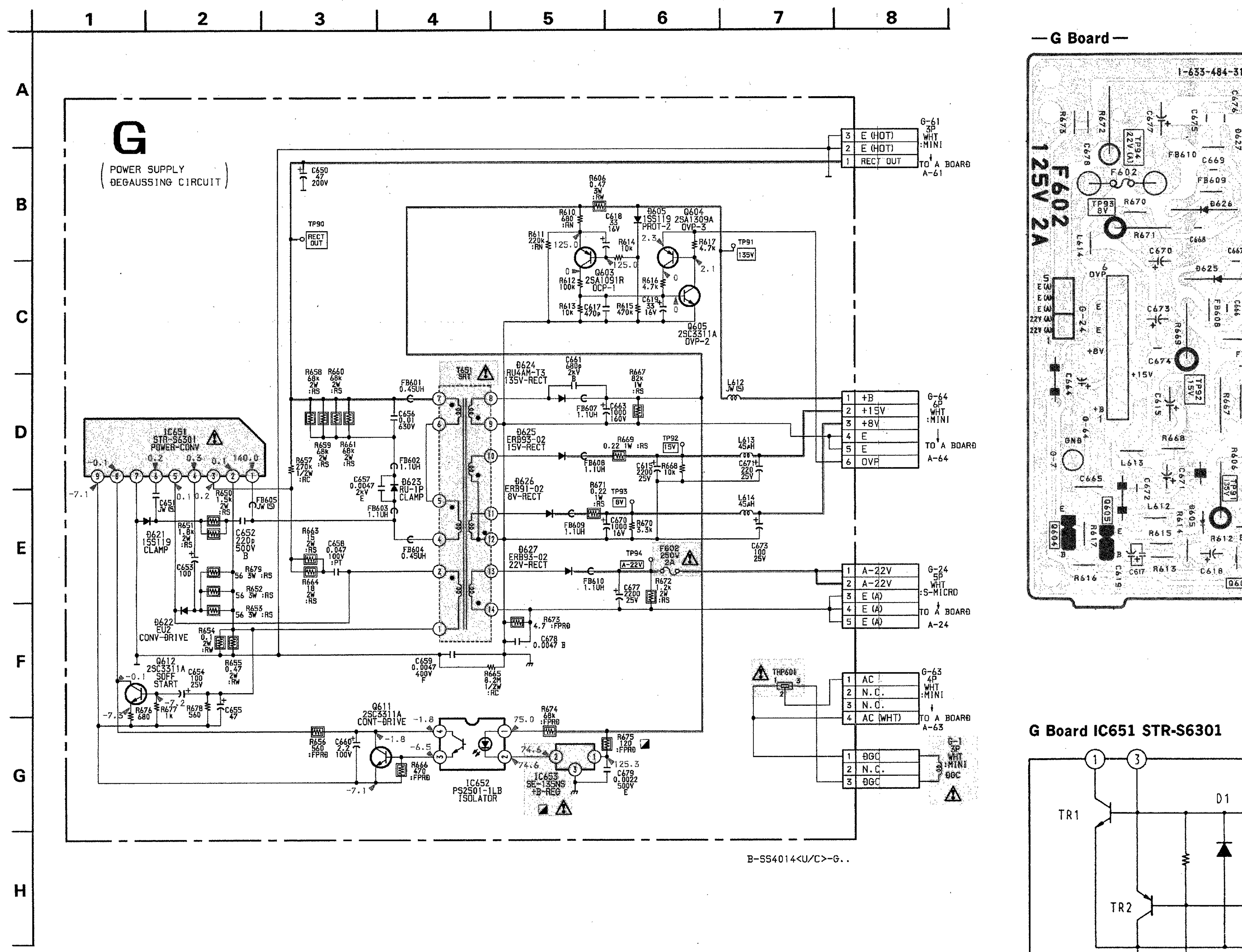




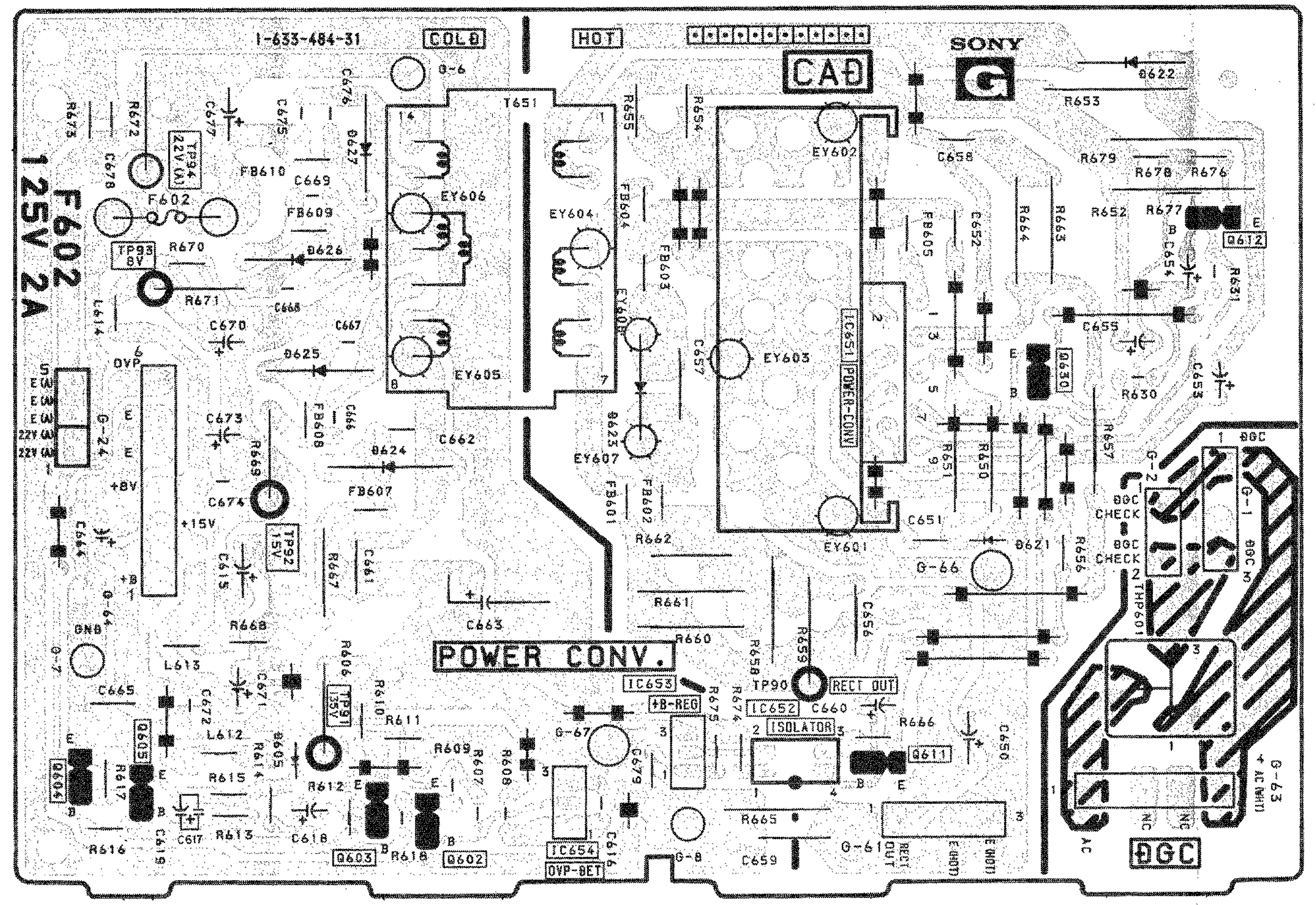
G [POWER SUPPLY DEGAUSSING CIRCUIT]



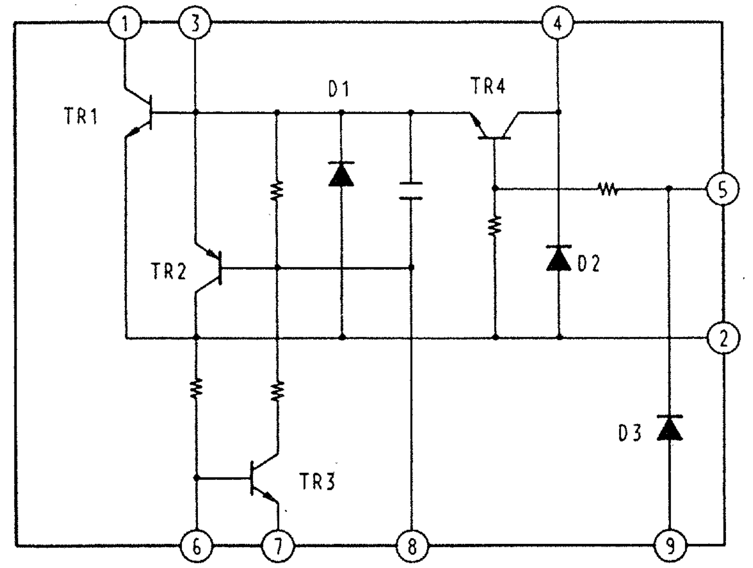
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.



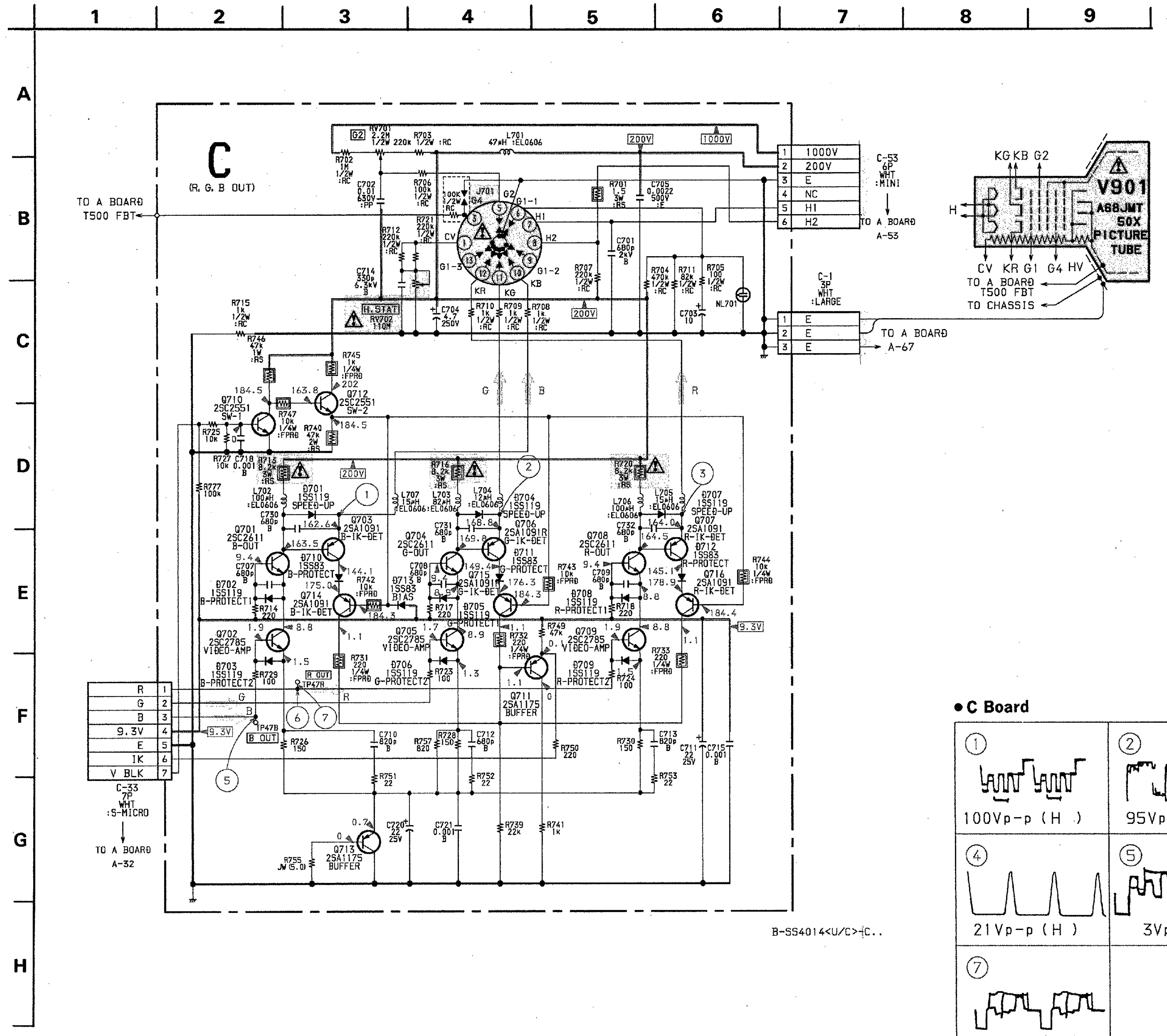
— G Board —



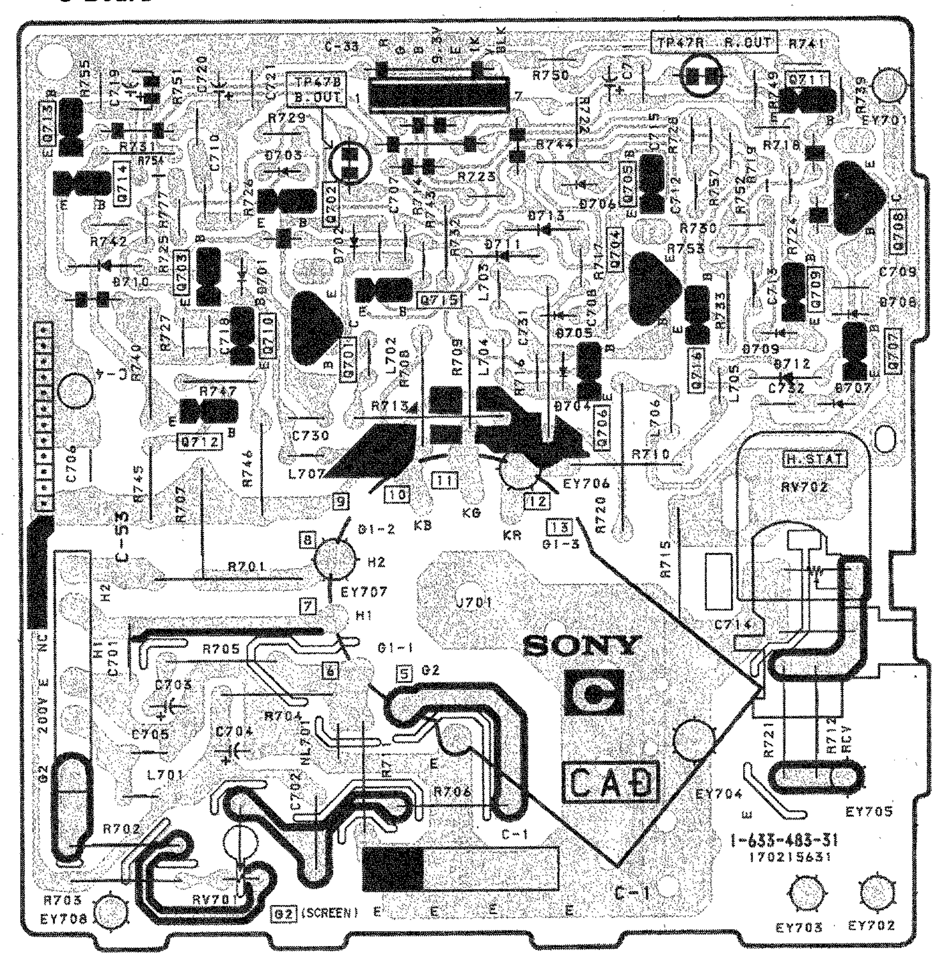
G Board IC651 STR-S6301



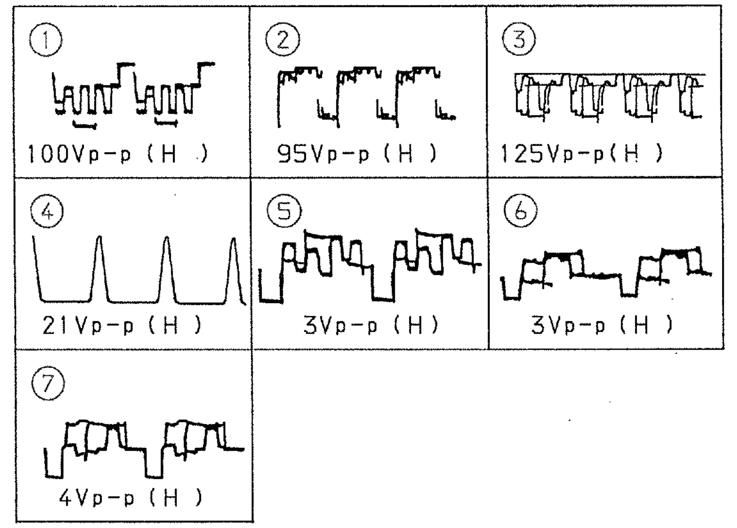
C [R. G. B OUT]



— C Board —

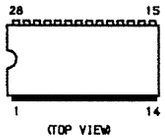


● C Board



6-4. SEMICONDUCTORS

CXA1114P



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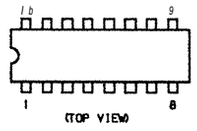
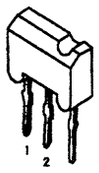
CXA1313S

CXA1315P
MB88201-638L
SN74LS123N
SN74LS19AN

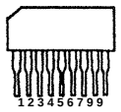


MN1280-S

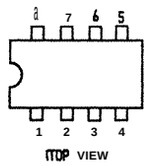


M37100M8-C16SP

NJM2245S



RC4558P



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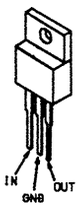

SBX1681-02
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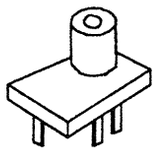
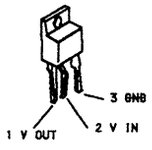
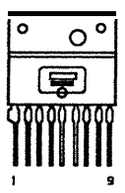


SE-13SNS



STR-S630 1



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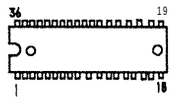

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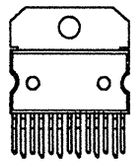

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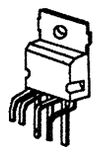

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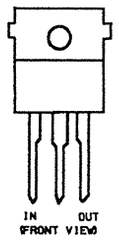
μPC7893HF



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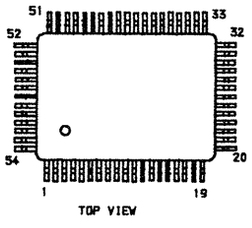

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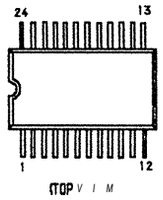

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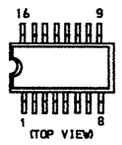

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2SC2551-O

2SA1 162-G
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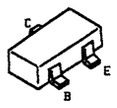
2SC2713-L



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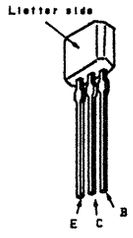

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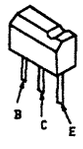

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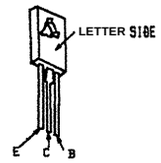

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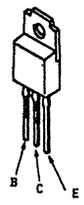

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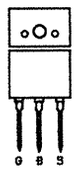

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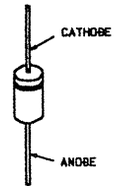
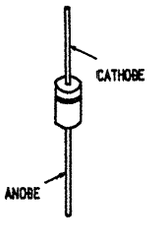
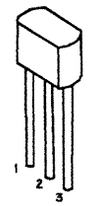
EU2A
RGP02-17
1SS83



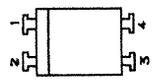
ERB93-02
RS3FS
RU-1P
RU-3AM
RU-30A
RU4DS



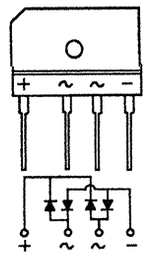
MA152WK



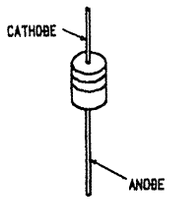
PC817-C
PS2501-1LB



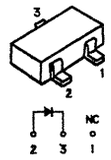
RBV-406H-01



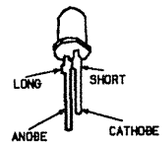
RD10ESB2
RD12ESB2
RD18ESB1
RD18ESB2
RD24ESB1
RD33ESB2
RD5.6ESB2
RD6.2ESB2
RD9.1ESB2
WG7 13A
1SS119
1SV113



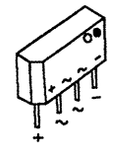
RD12M-B1
RD3.6M-B1
RD5.1M-B2
RD6.8M-B1



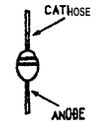
SEL1222R-C



SIVB40



U05G



SECTION 7
EXPLODED VIEWS

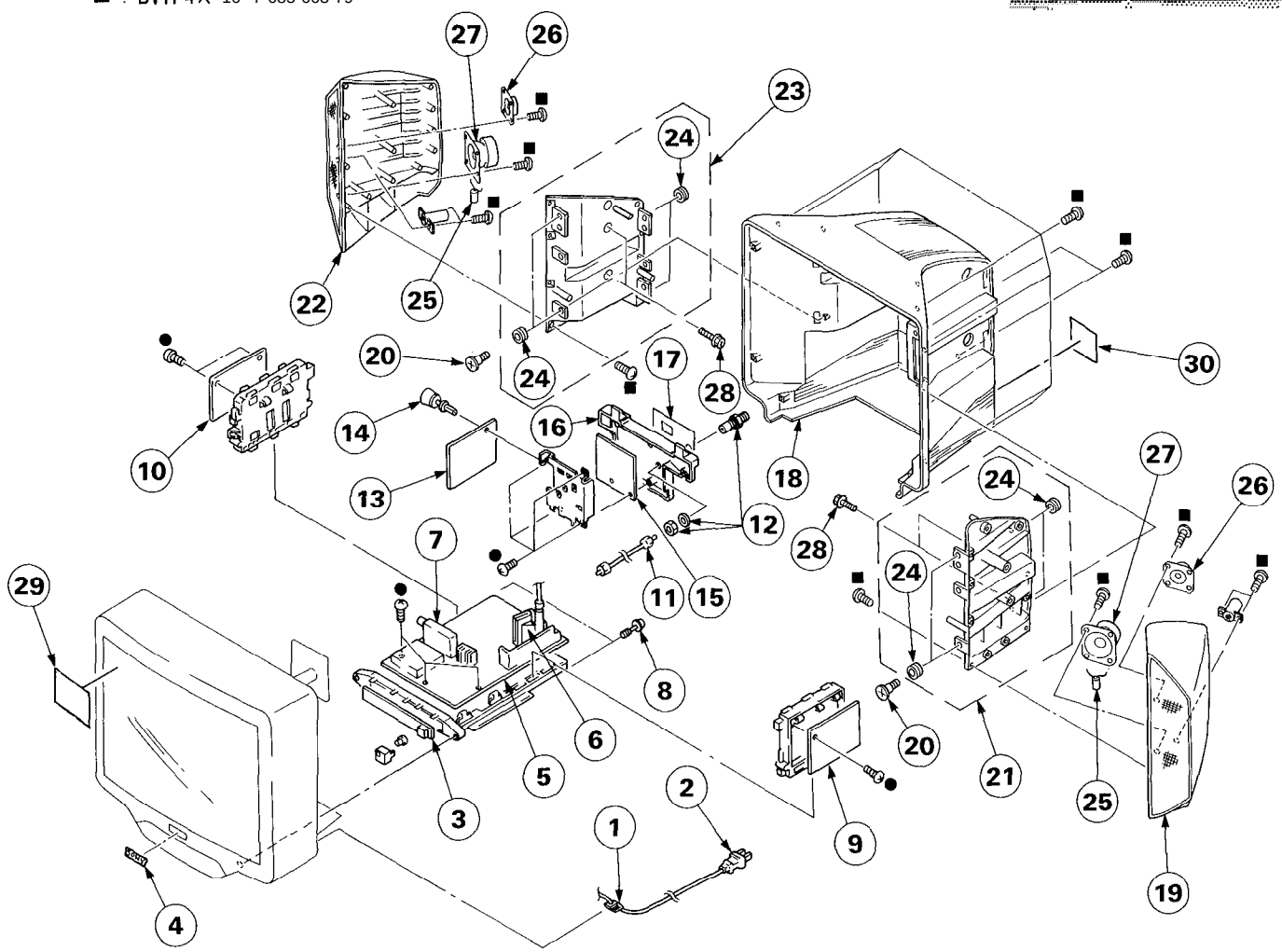
NOTE:
- Items with no part number and *no* description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety
Replace only with part number specified

Les composants identifies par une trame et par une marque ⚠ sont d'une importance critique pour la sécurité Ne les remplacer que par des pièces de numéro spécifié

7-1. CHASSIS

● : BVTP3 X 12 7-685-648-79
■ : BVTP4X 16 7-685-663-79

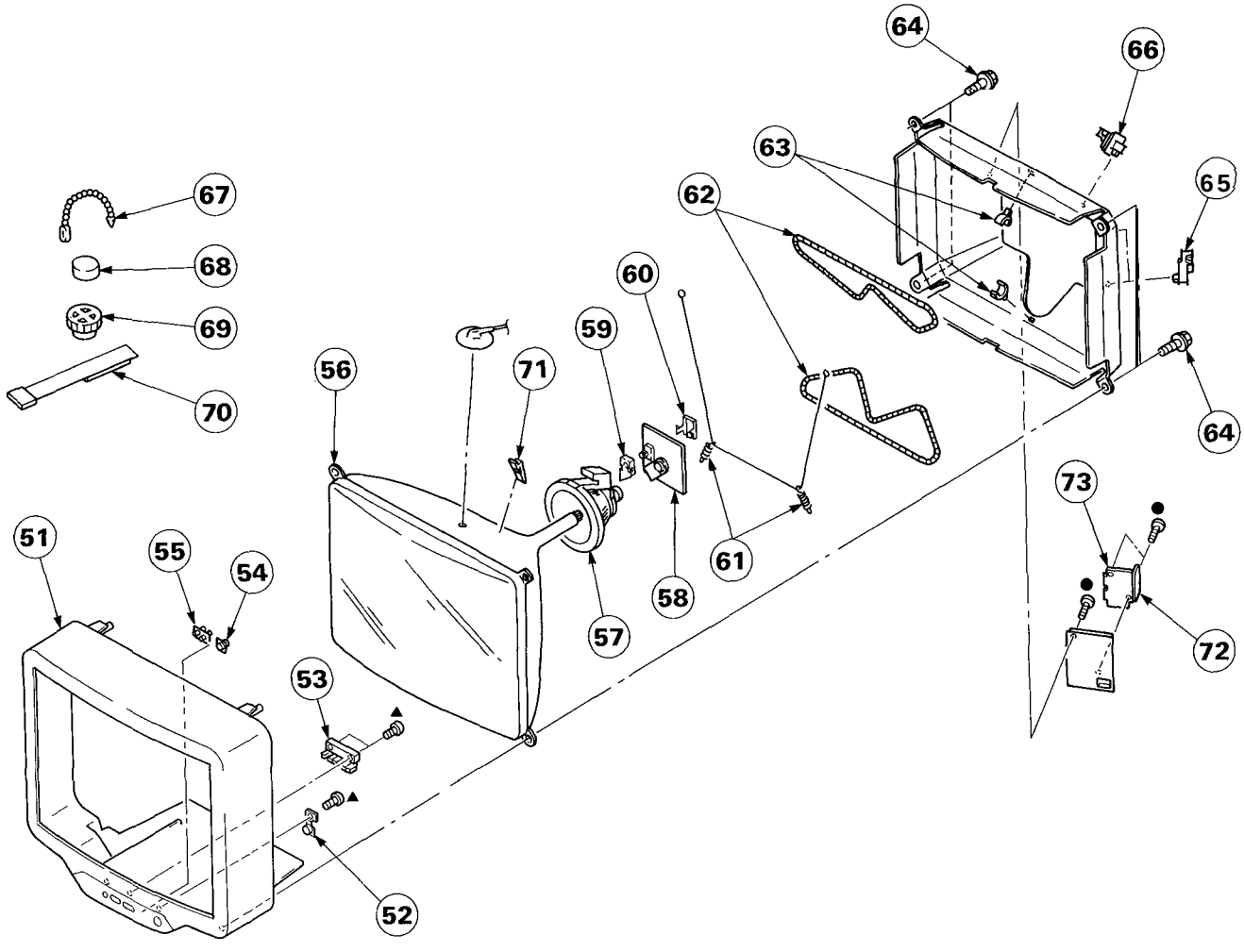


REF NO	PART NO	DESCRIPTION	REMARK
1	⚠ 4-388-328-11	GROMMET, AC CORD	
2	⚠ 1-590-442-11	CORD, POWER (WITH CONNECTOR)	
3	*1-637-953-11	M BOARD	
4	4-394-048-01	EMBLEM (NO.9), SONY	
5	*A-1296-937-A	A BOARD, COMPLETE	
6	⚠ 1-430-418-41	TRANSFORMER ASSY, FLYBACK (NX-1604)	
7	⚠ 1-465-384-11	TUNER, ET (BTP-202)	
8	4-319-528-11	SCREW, SPECIAL (+PW4X30)	
9	*A-1316-114-A	G BOARD, COMPLETE	
10	*A-1195-038-A	P BOARD, COMPLETE	
11	*1-556-945-21	CABLE, P-P	
12	1-561-306-00	JACK, PIN (F)	
13	*A-1394-314-A	U1 BOARD, COMPLETE	
14	*4-397-418-01	RIVET, T TYPE	
15	*1-637-487-41	**U2 BOARD**	
16	4-397-918-01	TERMINAL **BOARD, ANTENNA**	
17	4-397-908-01	LABEL (A), ANTENNA	
18	X-4029-509-2	COVER **SUB** ASSY, **REAR**	
19	X-4029-504-1	**BOX (TOP)** (R) ASSY, **SPEAKER**	
20	4-394-044-01	SCREW, STEP HILO TAPPING	
21	X-4029-506-1	BOX(BOTTOM)(RIGHT)ASSY,SPEAKER	24
22	X-4029-505-2	BOX (TOP) (L) ASSY, SPEAKER	
23	X-4029-507-1	BOX(BOTTOM)(LEFT)ASSY, **SPEAKER**	24
24	4-396-117-01	**CUSHION (A)**	
25	1-124-768-11	**CAP, ELECT** 4.7MF 20% 50V	
26	1-544-519-11	**SPEAKER**	
27	1-544-520-11	SPEAKER	
28	4-378-522-01	**SCREW, TAPPING. HEXAGON HEAD**	
29	*3-703-703-01	STICKER, SONY SYMBOL (50)	
30	*3-703-044-26	**LABEL, CAUTION**	

7-2. PICTURE TUBE

a: BVTP3×12 7-685-648-79

A : BVTP3× 1 6 7-685-650-79



The components identified by shading and mark ⚠ are critical for safety
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF Nil	PART NO	DESCRIPTION	REMARK
51	X-4029-614-4	CABINET SUB ASSY (WITH BEZEL SUB ASSY)	
52	X-4029-502-1	BUTTON ASSY, POWER	
53	X-4029-501-1	BUTTON ASSY, MULTI	
54	4-031-271-01	FILTER	
55	4-031-273-01	GUIDE, LIGHT	
56	⚠ A-737-253-05	PICTURE TUBE (A68LMT50X)	
57	⚠ 1-451-275-31	DEFLECTION YOKE (Y28PFA)	
58	*A-1331-055-A	C BOARD, COMPLETE	
59	*4-379-167-01	COVER (MAIN), CV	
60	*4-379-160-01	COVER (REAR LID), CV	
61	4-036-329-01	SPRING (B), TENSION	
62	⚠ 1-425-450-11	COIL, DEMAGNETIZATION	
63	*4-371-629-01	STOPPER, WIRE	
64	4-390-505-01	SCREW (7), TAPPING	
65	*4-387-284-01	HOLDER, LEAD	
66	4-033-681-01	HOLDER, LEAD	
67	4-308-870-00	CLIP, LEAD WIRE	
68	1-452-032-00	MAGNET, DISK; 10MM ϕ	
69	1-452-094-00	MAGNET, ROTATABLE DISK: 15MM ϕ	
70	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	
71	3-704-495-01	SPACER, DY	
72	*1-637-952-22	E BOARD	
73	8-741-681-02	IC SBX1681-02	

SECTION 8
ELECTRICAL PARTS LIST

P

NOTE:

- Items marked " * " are not stocked, since they are seldom required for routine service. Some delay should be anticipated when orderina these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS . MF : μF, PF : μμF

COILS • MMH : mH, UH : μH

- The components identified by ❑ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation Should replacement be required, replace only with the value originally used.

The components identified by shading and mark ⚠ are critical for safety
Replace only with part number specified

Les composants identifiés par une trame et par une marque ⚠ sont d'une importance critique pour la sécurité Ne les remplacer que par des pièces de numéro spécifié

REF NO.	PART NO.	DESCRIPTION	REMARK
	*A-1195-038-A	P BOARD, COMPLETE	
		**********	
	*3-738-015-01	COVER, (DIA. 6) CARBON VR	
	*4-363-404-00	HOLDER, IC	
		<CAPACITOR>	
C2000	I-124-907-11	ELECT 10MF 20% 50V	
C2001	l-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
C2002	I-126-101-11	ELECT 100MF 20% 16V	
C2101	I-163-125-00	CERAMIC CHIP 220PF 5% 50v	
C2102	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50v	
C2103	l-124-907-11	ELECT 10MF 20% 50V	
C2104	I-124-907-11	ELECT 10MF 20% 50V	
C2105	l-124-907-11	ELECT 10MF 20% 50V	
C2106	I-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
C2107	l-124-499-11	ELECT 1MF 20% 50V	
C2108	1-124-499-11	ELECT 1MF 20% 50V	
C2109	1-124-499-11	ELECT 1MF 20% 50V	
C2110	I-163-107-00	CERAMIC CHIP 39PF 5% 50v	
C2112	l-124-907-11	ELECT 10MF 20% 50V	
C2119	l-130-483-00	MYLAR 0.01MF 5% 50v	
C2120	l-163-125-00	CERAMIC CHIP 220PF 5% 50V	
C2121	I-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	
C2122	l-163-125-00	CERAMIC CHIP 220PF 5% 50v	
C2123	l-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
C2125	l-124-903-11	ELECT 1MF 20% 50v	
C2126	I-124-907-11	ELECT 10MF 20% 50V	
C2127	I-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C2128	l-124-902-00	ELECT 0.47MF 20% 50v	
C2129	l-163-105-00	CERAMIC CHIP 33PF 5% 50V	
C2130	l-163-103-00	CERAMIC CHIP 27PF 5% 50V	
C2131	I-163-093-00	CERAMIC CHIP IOPF 5% 50v	
C2132	l-124-907-11	ELECT 10MF 20% 50V	
C2133	l-163-115-00	CERAMIC CHIP 82PF 5% 50V	
C2134	l-163-115-00	CERAMIC CHIP 82PF 5% 50V	
C2135	l-163-123-00	CERAMIC CHIP 180PF 5% 50v	
C2136	l-163-115-00	CERAMIC CHIP 82PF 5% 50V	
C2137	l-124-034-51	ELECT 33MF 20% 16V	
C2138	l-163-109-00	CERAMIC CHIP 47PF 5% 50V	
C2139	I-163-093-00	CERAMIC CHIP 10PF 5% 50V	
C2140	l-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C2141	1-124-768-11	ELECT 4.7MF 20% 50v	
C2142	l-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C2143	l-124-477-11	ELECT 47MF 20% 16V	
C2144	l-124-907-11	ELECT 10MF 20% 50v	
C2145	l-130-476-00	MYLAR 0.0027MF 5% 50v	
C2146	-163-809-11	CERAMIC CHIP 0.047MF 10% 25V	
C2147	-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C2148	-164-232-11	CERAMIC CHIP 0.01MF 10% 50v	
C2150	-163-037-11	CERAMIC CHIP 0.022MF 10% 25V	
C2151	I-123-382-00	ELECT 3.3MF 20% 50V	
C2152	l-163-023-00	CERAMIC CHIP 0.015MF 10% 50V	
C2153	l-136-165-00	FILM 0.1MF 5% 50V	
C2154	I-136-169-00	FILM 0.22MF 5% 50V	
C2155	l-124-902-00	ELECT 0.47MF 20% 50V	
C2156	l-124-925-11	ELECT 2.2MF 20% 50v	
C2157	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	
C2158	l-163-109-00	CERAMIC CHIP 47PF 5% 50v	
C2162	I-163-123-00	CERAMIC CHIP 180PF 5% 50V	
C2163	1-163-123-00	CERAMIC CHIP 180PF 5% 50V	
C2164	l-163-123-00	CERAMIC CHIP 180PF 5% 50V	
C2176	l-163-009-11	CERAMIC CHIP 0.001MF 10% 50v	
C2178	l-124-034-51	ELECT 33MF 20% 16V	
C2179	l-124-034-51	ELECT 33MF 20% 16V	
C2181	l-164-232-11	CERAMIC CHIP 0.01MF 10% 50v	
C2182	l-124-477-11	ELECT 47MF 20% 16V	
C2200	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50v	
C2201	l-124-907-11	ELECT 10MF 20% 50v	
C2202	l-163-009-11	CERAMIC CHIP 0.001MF 10% 50v	
C2205	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50v	
C2206	l-124-903-11	ELECT 1MF 20% 50v	
C2207	l-164-232-11	CERAMIC CHIP 0.01MF 10% 50v	
C2208	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50v	
C2209	l-163-129-00	CERAMIC CHIP 330PF 5% 50V	
C2210	l-163-109-00	CERAMIC CHIP 47PF 5% 50V	
C2211	I-124-903-11	ELECT 1MF 20% 50v	
C2212	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50v	
C2213	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C2214	l-126-101-11	ELECT 100MF 20% 16V	
C2215	l-163-009-11	CERAMIC CHIP 0.001MF 10% 50v	
C2216	l-163-129-00	CERAMIC CHIP 330PF 5% 50v	
C2217	l-124-907-11	ELECT 10MF 20% 50V	
C2218	l-126-101-11	ELECT 100MF 20% 16V	
C2219	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50v	
C2220	l-124-903-11	ELECT 1MF 20% 50V	
C2221	l-164-232-11	CERAMIC CHIP 0.01MF 10% 50v	
C2222	l-126-101-11	ELECT 100MF 20% 16V	
C2223	I-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C2224	l-124-903-11	ELECT 1MF 20% 50V	
C2225	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C2226	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50v	
C2227	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C2228	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C2229	l-126-101-11	ELECT 100MF 20% 16V	
C2230	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C2231	l-126-101-11	ELECT 100MF 20% 16V	
C2232	l-124-907-11	ELECT 10MF 20% 50v	
C2233	I-124-907-11	ELECT 10MF 20% 50v	
C2234	l-124-907-11	ELECT 10MF 20% 50V	
C2235	l-124-757-00	ELECT 2.2MF 20% 50V	
C2239	I-163-038-00	CERAMIC CHIP 0.1MF 25V	

REF NO.	PART NO.	DESCRIPTION			REMARK
C2240	l-163-038-00	CERAMIC CHIP	0.1MF		25V
C2241	l-163-038-00	CERAMIC CHIP	0.1MF		25V
C2242	I-124-907-11	ELECT	10MF	20%	50V
C2243	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2304	I-124-034-51	ELECT	33MF	20%	16V
C2601	l-126-101-11	ELECT	100MF	20%	16V
C2602	I-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2603	1-126-101-11	ELECT	100MF	20%	16V
C2604	1-126-101-11	ELECT	100MF	20%	16V
C2605	I-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2606	l-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2607	l-126-101-11	ELECT	100MF	20%	16V
C2608	I-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2609	l-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2610	1-126-101-11	ELECT	100MF	20%	16V
C2611	I-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2612	l-126-101-11	ELECT	100MF	20%	16V
C2613	1-124-478-11	ELECT	100MF	20%	25V

<DIODE>

D2011	g-719-105-51	DIODE	RD3.6M-B1
D2012	B-719-400-18	DIODE	MA152WK
D2102	8-719-400-18	DIODE	MA152WK
D2103	8-719-400-18	DIODE	MA152WK
D2106	8-719-400-18	DIODE	MA152WK
D2107	8-719-400-18	DIODE	MA152WK
D2108	g-719-302-43	DIODE	EL1Z
D2130	8-719-400-18	DIODE	MA152WK
D2131	g-719-105-82	DIODE	RD5.1M-B2
D2550	g-719-106-16	DIODE	RD6.8M-B1
D2551	8-719-106-16	DIODE	RD6.8M-B1
D2552	g-719-106-70	DIODE	RD12M-B1
D2553	g-719-106-70	DIODE	RD12M-B1

<FILTER>

FL2204	l-249-377-11	CARBON	0.47 5%	1/4W	F
FL2205	l-404-892-11	COIL			
FL2206	l-404-893-11	COIL			
FL2207	l-236-071-11	ENCAPSULATED	COMPONENT		
FL2208	l-236-071-11	ENCAPSULATED	COMPONENT		
FL2209	l-249-377-11	CARBON	0.47 5%	1/4W	F
FL2210	1-236-129-11	ENCAPSULATED	COMPONENT		
FL2211	1-249-377-11	CARBON	0.47 5%	1/4W	F
FL2212	1-249-377-11	CARBON	0.47 5%	1/4W	F
FL2213	1-249-377-11	CARBON	0.47 5%	1/4W	F
FL2214	l-249-377-1	CARBON	0.47 5%	1/4W	F
FL2215	l-236-163-1	ENCAPSULATED	COMPONENT		
FL2216	1-236-163-1	ENCAPSULATED	COMPONENT		
FL2217	1-249-377-1	CARBON	0.47 5%	1/4W	F
FL2218	1-236-129-11	ENCAPSULATED	COMPONENT		
FL2220	I-236-163-11	ENCAPSULATED	COMPONENT		
FL2221	1-236-163-11	ENCAPSULATED	COMPONENT		

<IC>

IC2000	8-752-057-18	IC	CXA1315P
IC2102	g-759-901-23	IC	SN74LS123N
IC2103	8-759-234-63	IC	TA8601BN-FA-1
IC2104	8-759-989-67	IC	SN74LS19AN
IC2201	g-759-148-69	IC	UPD6901G
IC2202	g-759-148-69	IC	UPD6901G
IC2203	8-759-148-69	IC	UPD6901G
IC2204	g-759-149-90	IC	UPD42272AGF
IC2206	8-759-148-68	IC	UPC661G
IC2601	8-759-982-31	IC	RC78M05FA
IC2602	8-759-982-26	IC	RC78L12A
IC2603	8-759-982-10	IC	RC7809FA

<COIL>

L2101	l-408-424-00	NDUCTOR	180UH
L2102	l-408-413-00	NDUCTOR	22UH
L2103	l-408-415-00	NDUCTOR	33UH
L2104	l-408-424-00	NDUCTOR	180UH
L2105	l-408-163-00	NDUCTOR	5.6MMH
L2106	l-408-415-00	NDUCTOR	33UH
L2109	l-408-421-00	NDUCTOR	100UH
L2110	l-408-418-00	NDUCTOR	56UH
L2200	l-408-421-00	NDUCTOR	100UH
L2201	l-408-421-00	NDUCTOR	100UH
L2601	l-408-427-00	INDUCTOR	330UH

<CONNECTOR>

P4	*1-564-505-11	PLUG, CONNECTOR	2P
P31	*1-564-515-11	PLUG, CONNECTOR	12P
P65	I-564-507-11	PLUG, CONNECTOR	4P

<TRANSISTOR>

Q2101	g-729-216-22	TRANSISTOR	2SA1162-G
Q2102	8-729-216-22	TRANSISTOR	2SA1162-G
Q2103	8-729-216-22	TRANSISTOR	2SA1162-G
Q2104	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2105	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2106	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2107	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2108	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q12109	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q12114	8-729-216-22	TRANSISTOR	2SA1162-G
Q12115	8-729-216-22	TRANSISTOR	2SA1162-G
Q2116	8-729-216-22	TRANSISTOR	2SA1162-G
Q2117	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2119	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2120	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2121	8-729-271-32	TRANSISTOR	2SC2713-L
Q2122	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2123	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2125	8-729-216-22	TRANSISTOR	2SA1162-G
Q2130	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2131	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2133	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2134	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2139	g-729-216-22	TRANSISTOR	2SA1162-G
Q2200	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2201	8-729-216-22	TRANSISTOR	2SA1162-G
Q2202	8-729-216-22	TRANSISTOR	2SA1162-G
Q2203	g-729-216-22	TRANSISTOR	2SA1162-G
Q2204	8-729-216-22	TRANSISTOR	2SA1162-G
Q2232	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2244	g-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2245	g-729-120-28	TRANSISTOR	2SC1623-L5L6

<RESISTOR>

REF NO.	PART NO.	DESCRIPTION			REMARK
JR1	I-216-295-00	METAL GLAZE 0	5%	1/10W	
JR2	I-216-295-00	METAL GLAZE 0	5%	1/10W	
JR3	1-216-295-00	METAL GLAZE 0	5%	1/10W	
JR4	l-216-295-00	METAL GLAZE 0	5%	1/10W	
R2000	I-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2001	l-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2002	I-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2003	l-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2004	l-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2006	l-216-055-00	METAL GLAZE 1.8K	5%	1/10W	
R2008	-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2009	-216-093-00	METAL GLAZE 68K	5%	1/10W	
R2010	-216-065-00	METAL GLAZE 4.7K	5%	1/10W	
R2011	-216-065-00	METAL GLAZE 4.7K	5%	1/10W	
A2012	-216-065-00	METAL GLAZE 4.7K	5%	1/10W	
R2013	I-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2108	I-216-075-00	METAL GLAZE 12K	5%	1/10W	
R2109	I-216-075-00	METAL GLAZE 12K	5%	1/10W	
R2110	1-216-077-00	METAL GLAZE 15K	5%	1/10W	
R2111	I-216-657-11	METAL CHIP 1.8K	0.50%	1/10W	
R2112	I-216-657-11	METAL CHIP 1.8K	0.50%	1/10W	
R2113	I-215-425-00	METAL 1.5K	1%	1/4W	
R2114	1-249-418-11	CARBON 1.2K	5%	1/4W	
R2115	l-216-059-00	METAL GLAZE 2.7K	5%	1/10W	
R2116	I-216-067-00	METAL GLAZE 5.6K	5%	1/10W	
R2117	l-216-655-11	METAL CHIP 1.5K	0.50%	1/10W	
R2118	1-216-051-00	METAL GLAZE 1.2K	5%	1/10W	
R2119	I-216-033-00	METAL GLAZE 220	5%	1/10W	
R2120	I-216-087-11	METAL GLAZE 39K	5%	1/10W	
R2121	I-216-059-00	METAL GLAZE 2.7K	5%	1/10W	
R2122	I-216-656-11	METAL CHIP 1.6K	0.50%	1/10W	
R2123	l-216-057-00	METAL GLAZE 2.2K	5%	1/10W	
R2124	l-215-434-00	METAL 3.6K	1%	1/4W	
R2125	I-216-057-00	METAL GLAZE 2.2K	5%	1/10W	
R2126	I-216-055-00	METAL GLAZE 1.8K	5%	1/10W	
R2127	-216-655-11	METAL CHIP 1.5K	0.50%	1/10W	
R2128	-216-055-00	HETAL GLAZE 1.8K	5%	1/10W	
R2129	-216-059-00	METAL GLAZE 2.7K	5%	1/10W	
R2130	-216-077-00	METAL GLAZE 15K	5%	1/10W	
R2131	-216-105-00	METAL GLAZE 220K	5%	1/10W	
R2132	l-216-049-00	METAL GLAZE 1K	5%	1/10W	
R2133	I-216-037-00	METAL GLAZE 330	5%	1/10W	
R2134	I-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2135	l-216-049-00	METAL GLAZE 1K	5%	1/10W	
R2136	l-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2137	l-216-049-00	METAL GLAZE 1K	5%	1/10W	
R2139	I-216-065-00	METAL GLAZE 4.7K	5%	1/10W	
R2140	I-216-093-00	METAL GLAZE 68K	5%	1/10W	
R2141	I-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2142	I-216-049-00	METAL GLAZE 1K	5%	1/10W	
R2143	l-216-049-00	METAL GLAZE 1K	53	1/10W	
R2144	I-216-041-00	METAL GLAZE 470	5%	1/10W	
R2145	1-249-377-11	CARBON 0.47	5%	1/4W	F
R2146	I-216-057-00	METAL GLAZE 2.2K	5%	1/10W	
R2147	I-216-057-00	METAL GLAZE 2.2K	5%	1/10W	
R2148	1-216-049-00	METAL GLAZE 1K	5%	1/10W	
R2149	1-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2150	1-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2152	1-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2153	1-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2154	1-216-049-00	METAL GLAZE 1K	5%	1/10W	
R2157	1-216-057-00	METAL GLAZE 2.2K	5%	1/10W	
R2165	1		5%	1/10W	
R2166	1-216-085-00	METAL GLAZE 33K	5%	1/10W	
R2167	I-216-057-00	METAL GLAZE 2.2K	5%	1/10W	
R2168	l-216-057-00	METAL GLAZE 2.2K	5%	1/10W	
R2169	l-216-073-00	METAL GLAZE 10K		1/10W	
R2170	1-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2171	l-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2172	1-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2173	l-216-025-00	METAL GLAZE 100	5%	1/10W	
R2174	l-216-033-00	METAL GLAZE 220	5%	1/10W	
R2175	l-216-071-00	METAL GLAZE 8.2K	5%	1/10W	
R2177	l-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2178	l-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2179	I-216-109-00	METAL GLAZE 330K	5%	1/10W	
R2180	l-216-053-00	METAL GLAZE 1.5K	5%	1/10W	
R12181	l-216-067-00	METAL GLAZE 5.6K	5%	1/10W	
R2182	l-216-073-00	METAL GLAZE 10K	5%	1/10W	
R12183	I-216-049-00	METAL GLAZE 1K	5%	1/10W	
R12184	l-216-051-00	METAL GLAZE 1.2K	5%	1/10W	
R12185	l-216-053-00	METAL GLAZE 1.5K	5%	1/10W	
R12186	l-216-057-00	METAL GLAZE 2.2K	5%	1/10W	
R12187	I-216-073-00	METAL GLAZE 10K	5%	1/10W	
R2188	l-216-053-00	METAL GLAZE 1.5K	5%	1/10W	
R2189	l-216-057-00	METAL GLAZE 2.2K	5%	1/10W	
R12190	l-216-097-00	METAL GLAZE 100K	5%	1/10W	
R12191	l-216-085-00	METAL GLAZE 33K	5%	1/10W	
R2192	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R12193	l-216-055-00	METAL GLAZE 1.8K	5%	1/10W	
R2194	l-216-049-00	METAL GLAZE 1K	5%	1/10W	
R12195	l-216-053-00	METAL GLAZE 1.5K	5%	1/10W	
R12196	l-216-294-00	METAL GLAZE 10M	5%	1/8W	
R12197	l-216-071-00	METAL GLAZE 8.2K	5%	1/10W	
R12198	l-216-097-00	METAL GLAZE 100K	5%	1/10W	
R2199	l-216-085-00	METAL GLAZE 33K	5%	1/10W	
R2200	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2201	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R12202	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R12203	1-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R12204	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R12205	l-216-295-00	METAL GLAZE 0	5%	1/10W	
R2207	l-216-085-00	METAL GLAZE 33K	5%	1/10W	
R12208	l-216-049-00	METAL GLAZE 1K	5%	1/10W	
R2209	I-216-081-00	METAL GLAZE 22K	5%	1/10W	
R2210	l-216-039-00	METAL GLAZE 390	5%	1/10W	
R2211	l-216-033-00	METAL GLAZE 220	5%	1/10W	
R2212	l-216-033-00	METAL GLAZE 220	5%	1/10W	
R2213	l-216-051-00	METAL GLAZE 1.2K	5%	1/10W	
R2214	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2215	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2216	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2217	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2218	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2219	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2220	l-216-051-00	METAL GLAZE 1.2K	5%	1/10W	
R2221	l-216-039-00	METAL GLAZE 390	5%	1/10W	
R2222	l-216-033-00	METAL GLAZE 220	5%	1/10W	
R2223	l-216-033-00	METAL GLAZE 220	5%	1/10W	
R2224	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2225	I-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2226	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2227	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2228	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2229	l-216-061-00	METAL GLAZE 3.3K	5%	1/10W	
R2230	l-216-051-00	METAL GLAZE 1.2K	5%	1/10W	
R2231	I-216-049-00	METAL GLAZE 1K	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R2232	I-216-039-00	METAL GLAZE 390 5% 1/10W	
R2233	I-216-033-00	METAL GLAZE 220 5% 1/10W	
R2234	l-216-033-00	METAL GLAZE 220 5% 1/10W	
R2236	l-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2237	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2238	l-216-037-00	METAL GLAZE 330 5% 1/10W	
R2239	l-216-037-00	METAL GLAZE 330 5% 1/10W	
R2240	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R2241	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2242	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2243	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2244	l-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2245	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2246	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2247	l-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2248	l-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2249	l-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2250	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2251	l-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2252	l-236-025-00	METAL GLAZE 100 5% 1/10W	
R2253	I-216-025-00	METAL GLAZE 100 5% 1/10W	
R2254	I-216-025-00	METAL GLAZE 100 5% 1/10W	
R2256	l-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2257	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2258	l-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2259	l-216-039-00	METAL GLAZE 390 5% 1/10W	
R2260	I-216-031-00	METAL GLAZE 180 5% 1/10W	
R2261	l-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2262	l-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2501	l-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R2502	l-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R2503	l-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R2504	I-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2505	l-216-037-00	METAL GLAZE 330 5% 1/10W	
R2506	l-216-095-00	METAL GLAZE 82K 5% 1/10W	
R2507	l-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R2508	l-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R2509	I-216-025-00	METAL GLAZE 100 5% 1/10W	
R2510	l-216-123-11	METAL GLAZE 1.2M 5% 1/10W	
R2511	l-216-121-00	METAL GLAZE 1M 5% 1/10W	
R2512	l-216-101-00	METAL GLAZE 150K 5% 1/10W	
R2513	l-216-033-00	METAL GLAZE 220 5% 1/10W	
R2514	I-216-029-00	METAL GLAZE 150 5% 1/10W	
R2515	l-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2516	I-216-037-00	METAL GLAZE 330 5% 1/10W	
R2517	I-216-075-00	METAL GLAZE 12K 5% 1/10W	
R2519	l-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R2520	I-216-295-00	METAL GLAZE 0 5% 1/10W	
R2521	l-216-295-00	METAL GLAZE 0 5% 1/10W	
R2522	l-216-295-00	METAL GLAZE 0 5% 1/10W	
R2523	l-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R2524	l-216-033-00	METAL GLAZE 220 5% 1/10W	
R2525	I-216-033-00	METAL GLAZE 220 5% 1/10W	
R2526	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2527	l-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2528	l-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2535	l-215-857-11	METAL OXIDE 10 5% 1W	F
R2540	l-216-077-00	METAL GLAZE 15K 5% 1/10W	
R2541	I-216-077-00	METAL GLAZE 15K 5% 1/10W	
R2542	l-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2550	I-216-049-00	METAL GLAZE 1K 5% mow	
R2551	l-216-295-00	METAL GLAZE 0 1/10W	
R2552	l-216-633-11	METAL CHIP 180 5'650% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<VARIABLE RESISTOR>	
RV2103	l-238-013-11	RES, ADJ, CARBON 2.2K	
RIV2105	l-238-013-11	RES, ADJ, CARBON 2.2K	
RV2106	l-238-017-11	RES, ADJ, CARBON 22K	
RV2107	l-238-016-11	RES, ADJ, CARBON 10K	
RV2108	l-238-012-11	RES, ADJ, CARBON 1K	
RIV2200	l-238-023-11	RES, ADJ. CARBON 470K	
RV2201	I-238-023-11	HES, ADJ, CARBON 470K	
		<CRYSTAL>	
X2101	I-567-505-11	OSCILLATOR, CRYSTAL	
X2102	l-577-706-11	VIBRATOR, CERAMIC	
		**********	
	*A-1296-937-A	A BOARD, COMPLETE	
		**********	
	*4-393-401-01	SPRING	
	*4-341-751-01	EYELET (EY6,EY9,EY13,EY14,EY17,EY19, EY20,EY22,EY25,EY26,EY28~EY31,EY52~EY54, EY59)	
	*4-341-752-01	EYELET (EY1~EY5,EY8,EY10~EY12,EY15,EY16, EY23,EY24,EY27,EY32~EY35,EY44~EY48,EY56, EY57,EY60~EY64)	
		<CONNECTOR>	
A11	*1-564-513-11	PLUG, CONNECTOR 10P	
A12	*1-564-510-11	PLUG, CONNECTOR 7P	
A21	*1-564-514-11	PLUG, CONNECTOR 11P	
A22	*l-565-509-11	CONNECTOR, BOARD TO BOARD 18P	
A23	*1-565-509-11	CONNECTOR, BOARD TO BOARD 18P	
A24	*1-564-508-11	PLUG, CONNECTOR 5P	
A31	*1-564-515-11	PLUG, CONNECTOR 12P	
A32	*l-564-510-11	PLUG, CONNECTOR 7P	
A51	*l-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)	
A52	*1-580-798-11	CONNECTOR PIN (DY) 6P	
A53	*l-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
A55	*l-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P	
A56	*1-559-991-21	CONNECTOR ASSY 1P	
A61	*l-508-765-00	PIN. CONNECTOR (5MM PITCH) 3P	
A63	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P	
A64	*l-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
A65	I-564-507-11	PLUG, CONNECTOR 4P	
A75	*1-580-843-11	PIN, CONNECTOR (POWER)	
		<CAPACITOR>	
C101	l-124-907-11	ELECT 10MF 20% 50V	
C102	1-126-233-11	ELECT 22MF 20% 25V	
C103	I-124-360-00	ELECT 1000MF 20% 16V	
C104	l-126-176-11	ELECT 220MF 20% 10V	
C105	l-126-101-11	ELECT 100MF 20% 16V	
C106	l-102-121-00	CERAMIC 0.0022MF 10% 50V	
C107	1-102-121-00	CERAMIC 0.0022MF 10% 50V	
C108	I-102-129-00	CERAMIC 0.01MF 10% 50V	
C110	l-162-215-31	CERAMIC 47PF 5% 50V	
C112	l-124-925-11	ELECT 2.2MF 20% 50V	
C113	l-102-121-00	CERAMIC 0.0022MF 10% 50V	
C114	I-124-907-11	ELECT 10MF 20% 50V	
C116	I-102-973-00	CERAMIC 100PF 5% 50V	
C118	I-102-973-00	CERAMIC 100PF 5% 50V	

Les composants identifiés par une trame et par une marque ⚠ sont d'une importance critique pour la sécurité Ne les remplacer que par des pièces de numéro spécifié.

The components identified by shading and mark ⚠ are critical for safety
Replace only with part number specified

REF.NO.	PART NO.	DESCRIPTION			REMARK
C120	1-119-160-00	ELECT	470MF		10V
C121	l-102-976-00	CERAMIC	180PF	5%	5ov
C122	l-102-973-00	CERAMIC	100PF	5%	5ov
C123	l-124-477-11	ELECT	47MF	20%	16V
C124	l-136-161-00	FILM	0.047MF	5%	5ov
Cl25	I-162-286-31	CERAMIC	220PF	10%	50V
Cl26	I-124-903-11	ELECT	1MF	20%	50V
('127	l-102-978-00	CERAMIC	220PF	5%	5ov
C128	l-102-129-00	CERAMIC	0.01MF	10%	5ov
Cl29	l-101-006-00	CERAMIC	0.047MF		5ov
Cl30	1-101-005-00	CERAMIC	0.022MF		50V
C131	1-101-005-00	CERAMIC	0.022MF		50V
Cl32	l-102-129-00	CERAMIC	0.01MF	10%	50V
C134	I-136-165-00	FILM	0.1MF	5%	50V
C135	I-136-173-00	FILM	0.47MF	5%	50V
C136	l-124-477-11	ELECT	47MF	20%	25v
C241	l-124-907-11	ELECT	10MF	20%	5ov
C251	l-124-903-11	ELECT	1MF	20%	50V
C252	I-136-157-00	FILM	0.022MF	5%	50V
C253	l-124-903-11	ELECT	1MF	20%	5ov
C254	l-130-309-00	FILM	0.033MF	5%	100V
C255	I-124-903-11	ELECT	1MF	20%	5ov
C256	I-124-478-11	ELECT	100MF	20%	25V
C257	l-124-927-11	ELECT	4.7MF	20%	50V
C258	I-124-902-00	ELECT	0.47MF	20%	50V
C259	I-124-903-11	ELECT	1MF	20%	5ov
C261	I-131-347-00	TANTALUM	1MF	20%	16V
C262	I-124-903-11	ELECT	1MF	20%	5ov
C263	l-124-903-11	ELECT	1MF	20%	50V
C264	I-124-907-11	ELECT	10MF	20%	50V
C265	l-136-170-00	FILM	0.27MF	5%	50V
C266	l-126-320-11	ELECT	10MF	20%	16V
C267	l-131-368-00	TANTALUM	3.3MF	10%	16V
C268	I-124-903-11	ELECT	1MF	20%	50V
C269	I-131-347-00	TANTALUM	1MF	20%	16V
C270	l-124-903-11	ELECT	1MF	20%	50V
c271	l-124-907-11	ELECT	10MF	20%	50V
C272	l-124-903-11	ELECT	1MF	20%	50V
C273	l-124-477-11	ELECT	47MF	20%	16V
C274	I-130-475-00	MYLAR	0.0022MF	5%	50V
C275	l-130-475-00	MYLAR	0.0022MF	5%	50V
C276	l-102-074-00	CERAMI	0.001MF	10%	50V
C277	l-126-320-11	ELECT	10MF	20%	16V
C278	l-124-903-11	ELECT	1MF	20%	50V
C279	l-124-903-11	ELECT	1MF	20%	50V
C281	l-124-907-11	ELECT	10MF	20%	50V
C282	I-124-907-11	ELECT	10MF	20%	50V
C284	I-124-907-11	ELECT	10MF	20%	50V
C301	l-102-973-00	CERAMIC	100PF	5%	50V
C302	I-124-903-11	ELECT	1MF	20%	50V
C303	I-136-153-00	FILM	0.01MF	5%	5ov
C304	l-124-234-00	ELECT	22MF	20%	16V
C305	I-124-903-11	ELECT	1MF	20%	50V
C306	1-101-006-00	CERAMIC	0.047MF		50V
C307	l-102-978-00	CERAMIC	220PF	5%	5ov
f-388	!-124-902-00	ELECT	0.47MF	20%	50V
C309	I-102-965-00	CERAMIC	39PF	5%	50V
C310	I-124-234-00	ELECT	22MF	20%	16V
C311	l-136-165-00	FILM	0.1MF	5%	5ov
C312	1-136-165-00	FILM	0.1MF	5%	5ov
C313	l-136-165-00	FILM	0.1MF	5%	5ov
C314	I-136-169-00	FILM	0.22MF	5%	5ov
C315	I-130-487-00	MYLAR	0.022MF	5%	5ov
C316	l-124-902-00	ELECT	0.47MF	20%	5ov
C317	l-124-360-00	ELECT	1000MF	20%	16V
C318	I-130-471-00	MYLAR	0.001MF	5%	50V
C319	l-124-903-11	ELECT	1MF	20%	5ov
C320	l-130-479-00	MYLAR	0.0047MF	5%	50V
C321	1-102-114-00	CERAMIC	470PF	10%	50V
C322	l-102-114-00	CERAMIC	470PF	10%	5ov
C324	l-124-903-11	ELECT	1MF	20%	50V
C325	l-136-153-00	FILM	0.01MF	5%	5ov
C326	l-124-903-11	ELECT	1MF	20%	5ov
C327	l-162-117-00	CERAMIC	100PF	10%	500V
C328	I-124-902-00	ELECT	0.47MF	20%	5ov
C329	l-124-477-11	ELECT	47MF	20%	16V
C330	l-102-116-00	CERAMIC	680PF	10%	50V
C332	l-136-169-00	FILM	0.22MF	5%	50V
C333	l-136-169-00	FILM	0.22MF	5%	50V
C334	l-136-157-00	FILM	0.022MF	5%	50V
C335	I-124-903-11	ELECT	1MF	20%	50V
C336	I-124-907-11	ELECT	10MF	20%	50V
C337	I-124-798-11	ELECT	1MF	20%	160V
C338	l-136-153-00	FILM	0.01MF	5%	5ov
"339	l-124-907-11	ELECT	10MF	20%	5ov
"341	I-124-902-00	ELECT	0.47MF	20%	5ov
C342	1-101-005-00	CERAMIC	0.022MF		50V
C343	I-124-477-11	ELECT	47MF	20%	16V
C344	l-124-120-11	ELECT	220MF	20%	16V
C345	1-124-925-11	ELECT	2.2MF	20%	50V
C346	I-124-925-11	ELECT	2 2MF	20%	5ov
C347	I-126-103-11	ELECT	470MF	20%	16V
c351	l-101-888-00	CERAMIC	68PF	5%	50V
C352	l-102-114-00	CERAMIC	470PF	10%	50V
C354	1-126-101-11	ELECT	100MF	20%	16V
C500	l-130-475-00	MYLAR	0.0022MF	5%	50V
C501	I-124-902-00	ELECT	0.47MF	20%	50V
C502	l-102-244-00	CERAMIC	2iOPF	10%	500V
C503	l-102-244-00	CERAMIC	220PF	10%	500V
C504	I-106-383-00	MYLAR	0.047MF		200V
C505	1-102-030-00	CERAMIC	330PF	10%	500V
C506 ⚠	1-162-115-91	CERAMIC	330PF	10%	2kV
C507 ⚠	1-137-024-11	FILM	0.02MF	5%	2kV
C509 ⚠	1-136-311-51	FILM	0.047MF	5%	400V
C512	1-124-927-11	ELECT	4.7MF	20%	50V
C513	I-102-228-00	CERAMIC	470PF	10%	500V
C516	l-136-113-00	FILM	2MF	5%	200V
C517	1-124-634-11	ELECT	1MF	20%	250V
C518	l-106-395-00	MYLAR	0.15MF	10%	200V
C521	I-136-165-00	FILM	0.1MF	5%	50V
C522	l-136-161-00	FILM	0.047MF	5%	5ov
C523	I-162-318-11	CERAMIC	0.001MF	10%	500V
C525	I-102-228-00	CERAMIC	470PF	10%	500V
C526	I-136-124-00	FILM	0.56MF	5%	4oov
C527	l-162-116-00	CERAMIC	680PF	10%	2KV
C528	I-162-116-00	CERAMIC	680PF	10%	2KV
C529	l-106-359-00	MYLAR	0.0047MF	10%	200V
C536	l-124-907-11	ELECT	10MF	20%	50V
C538	l-124-927-11	ELECT	4.7MF	20%	50V
c539	I-124-477-11	ELECT	47MF	20%	25V
C540	l-124-911-11	ELECT	220MF	20%	5ov
C541	l-136-165-00	FILM	0.1MF	5%	5ov
C542	1-136-161-00	FILM	0 047MF	5%	50V
C545	1-123-932-00	ELECT	4.7MF	20%	160V
C546	I-106-216-00	MYLAR	0.068MF	10%	100V
c547	l-124-557-11	ELECT	1000MF	20%	25V
C548	l-162-114-00	CERAMIC	0.0047MF		2KV

Les composants identifiés par une trame et par une marque ⚠ sont d'une importance critique pour la sécurité Ne les remplacer que par des pièces de numéro spécifié.

The components identified by shading and mark ⚠ are critical for safety
Replace only with part number specified

REF NO	PART NO.	DESCRIPTION				REMARK
C549	1-123-947-00	ELECT	10MF	20%	250V	
C551 ⚠	1-108-433-51	MYLAR	0.3MF	10%	200V	
C552	1-123-024-21	ELECT	33MF		160V	
C553	I-124-557-11	ELECT	1000MF	20%	25V	
C554	I-102-228-00	CERAMIC	470PF	10%	500V	
C555	I-124-477-11	ELECT	47HF	20%	25V	
C556	I-102-228-00	CERAMIC	470PF	10%	500V	
C557	I-106-387-00	MYLAR	0.068MF	10%	200V	
C558	l-136-161-00	FILM	0.047MF	5%	50V	
C561	1-124-910-11	ELECT	47MF	20%	50V	
C562	1-124-902-00	ELECT	0.47MF	20%	50V	
C563	1-124-902-00	ELECT	0.47MF	20%	50V	
C565	1-124-903-11	ELECT	1MF	20%	50V	
C573	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C601 ⚠	1-136-311-51	FILM	0.47MF	20%	125V	
C603 ⚠	1-162-576-51	CERAMIC	0.001MF	10%	400V	
C604 ⚠	1-136-311-51	FILM	0.47MF	20%	125V	
C605 ⚠	1-161-953-92	CERAMIC	0.0047MF	20%	400V	
C606 ⚠	1-161-953-92	CERAMIC	0.0047MF	20%	400V	
C607	1-125-538-11	ELECT(BLOCK)	1000MF	20%	200V	
C608	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C609	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C610	1-124-480-11	ELECT	470MF	20%	25V	
C611	1-124-480-11	ELECT	470MF	20%	25V	
C612	1-124-477-11	ELECT	47MF	20%	16V	
C613	1-124-478-11	ELECT	100MF	20%	25V	
C614	l-124-907-11	ELECT	10MF	20%	50V	
C620	l-124-478-11	ELECT	100MF	20%	25V	
C621	1-126-101-11	ELECT	100MF	20%	16V	
C622	1-126-101-11	ELECT	100MF	20%	16V	
C623	1-126-101-11	ELECT	100MF	20%	16V	
C625	I-124-907-11	ELECT	10MF	20%	50V	
C626	I-136-165-00	FILM	0.1MF	5%	50V	
C627	I-124-477-11	ELECT	47HF	20%	16V	

<COMPOSITION CIRCUIT BLOCK>

CP101	l-236-294-11	NETWORK,	RES		
CP102	l-236-491-11	NETWORK,	RES,	THICK	FILM
CP103	1-236-358-21	NETWORK,	RES		
CP104	1-236-479-11	NETWORK,	C		
CPI06	l-236-301-11	NETWORK,	C		
CP107	l-236-491-11	NETWORK,	RES,	THICK	FILM
CP108	l-236-301-11	NETWORK,	C		
CPI09	1-236-776-11	NETWORK,	RES		
CP110	l-232-680-11	COMPOSITION	CIRCUIT	BLOCK	
CP301	l-236-730-11	NETWORK,	C		

<DIODE>

D103	8-719-974-81	DIODE	1SV113
D104	8-719-911-19	DIODE	1SS119
D105	g-719-911-19	DIODE	1SS119
D106	g-719-911-19	DIODE	1SS119
D107	8-719-911-19	DIODE	1SS119
D108	8-719-911-19	DIODE	1SS119
D109	8-719-911-19	DIODE	1SS119
D250	g-719-109-93	DIODE	RD6.2ES-B2
D251	g-719-109-93	DIODE	RD6.2ES-B2
D252	8-719-110-31	DIODE	RD12ES-B2
D300	8-719-911-19	DIODE	1SS119
D301	8-719-109-89	DIODE	RD5.6ES-B2
D302	8-719-109-89	DIODE	RD5.6ES-B2
D303	8-719-911-19	DIODE	1SS119
D304	8-719-110-13	DIODE	RD9.1ES-B2
D305	g-719-110-48	DIODE	RD18ES-B1
D306	g-719-911-19	DIODE	1SS119
D307	8-719-911-19	DIODE	1SS119
D308	g-719-110-49	DIODE	RD18ES-B2
D310	g-719-109-93	DIODE	RD6.2ES-B2
D311	8-719-109-93	DIODE	RD6.2ES-B2
D500	g-719-911-55	DIODE	U05G
D501	g-719-312-71	DIODE	RS3FS
D502	8-719-911-55	DIODE	U05G
D503	8-719-312-72	DIODE	RU30A
D504	8-719-911-55	DIODE	U05G
D505	8-719-911-55	DIODE	U05G
D506	8-719-312-71	DIODE	RS3FS
D507	8-719-109-93	DIODE	RD6.2ES-B2
D509	8-719-911-19	DIODE	1SS119
D510	g-719-911-55	DIODE	U05G
D514	g-719-911-19	DIODE	1SS119
D515	8-719-911-19	DIODE	1SS119
D517	8-719-976-64	DIODE	RGP02-17
D519	8-719-300-33	DIODE	RU-3AM
D520	8-719-979-85	DIODE	EGP20G
D521	8-719-979-85	DIODE	EGP20G
D531	g-719-302-43	DIODE	EL1Z
D540	8-719-110-61	DIODE	RD24ES-B1
D563	8-719-911-19	DIODE	1SS119
D601 ⚠	8-719-305-17	DIODE	RBV-406R
D602	8-719-511-40	DIODE	S1VB40
D603	8-719-911-55	DIODE	U05G
D604	8-719-911-19	DIODE	1SS119
D606	8-719-110-78	DIODE	RD33ES-B2

<FUSE>

F601 ⚠	1-532-748-11	FUSE, GLASS TUBE 6.3A/125V	
	1-533-223-11	CLIP, FUSE; F601	

<IC>

IC101	8-759-062-90	IC	M37100M8-C16SP
IC102	8-759-720-74	IC	X24C04P
IC103	8-759-403-44	IC	MN1280-S
IC104	8-759-978-66	IC	MB88201-638L
IC251	8-752-037-24	IC	CXA1264AS
IC301	8-752-035-52	IC	CXA1313S
IC500	g-759-980-58	IC	TDA8172
IC531	8-759-945-58	IC	RC4558P
IC601	8-759-112-06	IC	UPC78N05H
IC603 ⚠	8-759-142-03	IC	UPC7833HF
IC604 ⚠	8-759-112-06	IC	UPC78N05H

<IF BLOCK>

IF201	-464-755-21	IF	BLOCK (IFE-450A)

<COIL>

L101	l-410-470-11	INDUCTOR	10UH
L102	l-408-408-00	INDUCTOR	8.2UH
L103	l-410-669-31	INDUCTOR	33UH
L104	l-408-413-00	INDUCTOR	22UH
L301	I-408-409-00	INDUCTOR	10UH
L501	1-422-613-11	COIL, AIR CORE	
L503	1-422-613-11	COIL, AIR CORE	

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REF NO.	PART NO.	DESCRIPTION	REMARK
L505	1-408-237-00	INDUCTOR 3.3MMH	
L506	1-459-104-00	COIL, DUST CORE	
L509	1-410-669-31	INDUCTOR 33UH	
L510 ⚠	1-408-698-21	INDUCTOR 8.2UH	
L511	1-408-225-00	INDUCTOR 3.3UH	
L512	1-408-225-00	INDUCTOR 3.3UH	
L513	1-408-698-00	INDUCTOR 8.2UH	
L514	1-408-698-00	INDUCTOR 8.2UH	
L515 ⚠	1-459-224-13	ELC	
L517	1-459 075-00	COIL,DYNAMIC CONVERSION CHOKE	
		<MODULE>	
PM50 ⚠	1-808-968-11	MODULE, PROTECTOR PM-20	
		<TRANSISTOR>	
Q101	X-729-119-78	TRANSISTOR 2SC2785-HFE	
Q102	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q105	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q106	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q107	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q108	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q130	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q202	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q203	B-729-119-78	TRANSISTOR 2SC2785-HFE	
Q301	8-729-119-76	TRANSISTOR 2SA1175-HRE	
Q302	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q303	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q304	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q305	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q306	X-729-119-78	TRANSISTOR 2SC2785-HFE	
Q307	8-729-967-32	TRANSISTOR 2SC2673-Q	
Q308	8-729-993-72	TRANSISTOR 2SA937-Q	
Q309	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q310	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q311	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q312	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q313	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q314	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q315	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q316	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q317	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q318	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q501	8-729-119-80	TRANSISTOR 2SC2688-LK	
9502	8-729-822-65	TRANSISTOR 2SD1886CA	
Q504	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q505	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q530	8-729-202-03	TRANSISTOR 2SD1408-Y	
9601	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Qh07	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q608	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		<RESISTOR>	
R101	1-249-417-I 1	CARBON 1K 5% 1/4W	
R102	1-249-425-1 1	CARBON 4.7K 5% 1/4W	
R103	1-249-409-I 1	CARBON 220 5% 1/4W	
RI04	1-249-409-l 1	CARBON 220 5% 1/4W	
R105	1-249-409-l 1	CARBON 220 5% 1/4W	
R106	1-249-425-I 1	CARBON 4.7K 5% 1/4W	
R107	1-249-441-l 1	CARBON 100K 5% 1/4W	
RI08	l-249-437-1 1	CARBON 47K 5% 1/4W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R109	l-249-429-11	CARBON 10K 5% 1/4W	
R110	l-247-903-00	CARBON 1M 5% 1/4W	
R113	1-249-417-11	CARBON 1K 5% 1/4W	
R114	l-249-435-11	CARBON 33K 5% 1/4W	
R115	l-249-435-11	CARBON 33K 5% 1/4W	
R116	1-249-411-11	CARBON 330 5% 1/4W	
R119	1-249-437-11	CARBON 47K 5% 1/4W	
R120	1-249-417-11	CARBON 1K 5% 1/4W	
R121	l-249-421-11	CARBON 2.2K 5% 1/4W	
R122	1-249-421-11	CARBON 2.2K 5% 1/4W	
R123	l-249-421-11	CARBON 2.2K 5% 1/4W	
R124	1-249-421-11	CARBON 2.2K 5% 1/4W	
R125	1-249-421-11	CARBON 2.2K 5% 1/4W	
R126	l-249-421-11	CARBON 2.2K 5% 1/4W	
R127	l-247-887-00	CARBON 220K 5% 1/4W	
R128	I-249-421-11	CARBON 2.2K 5% 1/4W	
R129	1-249-421-11	CARBON 2.2K 5% 1/4W	
R130	1-249-421-11	CARBON 2.2K 5% 1/4W	
R131	1-249-421-11	CARBON 2.2K 5% 1/4W	
R132	1-249-421-11	CARBON 2.2K 5% 1/4W	
R133	l-249-409-11	CARBON 220 5% 1/4W	
R134	1-249-421-11	CARBON 2 2K 5% 1/4W	
R135	1-249-421-11	CARBON 2.2K 5% 1/4W	
R136	1-249-421-11	CARBON 2.2K 5% 1/4W	
R137	r-249-421-11	CARBON 2.2K 5% 1/4W	
R138	1-249-421-11	CARBON 2.2K 5% 1/4W	
R139	I-249-421-11	CARBON 2.2K 5% 1/4W	
R140	l-249-421-11	CARBON 2.2K 5% 1/4W	
R141	l-249-421-11	CARBON 2.2K 5% 1/4W	
R142	I-249-429-11	CARBON 10K 5% 1/4W	
R143	l-249-413-11	CARBON 470 5% 1/4W	
R144	I-249-429-11	CARBON 10K 5% 1/4W	
R145	I-249-422-11	CARBON 2.7K 5% 1/4W	
R146	1-249-422-11	CARBON 2.7K 5% 1/4W	
R147	1-249-422-11	CARBON 2.7K 5% 1/4W	
R148	l-249-437-11	CARBON 47K 5% 1/4W	
R149	l-249-421-11	CARBON 2.2K 5% 1/4W	
R150	l-249-425-11	CARBON 4 7K 5% 1/4W	
R151	l-249-421-11	CARBON 2.2K 5% 1/4W	
R152	l-249-421-11	CARBON 2.2K 5% 1/4W	
R153	l-249-424-11	CARBON 3.9K 5% 1/4W	
R154	l-249-421-11	CARBON 2.2K 5% 1/4W	
R155	I-249-421-11	CARBON 2.2K 5% 1/4W	
R156	1-249-417-11	CARBON 1K 5% 1/4W	
R157	1-249-417-11	CARBON 1K 5% 1/4W	
R158	1-249-417-11	CARBON 1K 5% 1/4W	
R159	1-249-417-11	CARBON 1K 5% 1/4W	
R161	1-215-892-11	METAL OXIDE 1K 5% 2w	F
R162	l-249-401-11	CARBON 47 5% 1/4W	
R163	l-249-410-11	CARBON 270 5% 1/4W	
R164	1-249-421-11	CARBON 2.2K 5% 1/4W	
R165	1-249-437-11	CARBON 47K 5% 1/4W	
R166	1-249-421-11	CARBON 2.2K 5% 1/4W	
R167	l-249-421-11	CARBON 2.2K 5% 1/4W	
R168	1-249-421-11	CARBON 2.2K 5% 1/4W	
R169	I-249-409-11	CARBON 220 5% 1/4W	
R170	l-249-409-11	CARBON 220 5% 1/4W	
R171	1-249-421-I	CARBON 2.2K 5% 1/4W	
R172	1-249-409-l	CARBON 220 5% 1/4W	
R174	1-249-409-I	CARBON 220 5% 1/4W	
R175	I-249-409-1	CARBON 220 5% 1/4W	
R176	1-249-429-l	CARBON 10K 5: 1/4W	
R177	1-249-429-11	CARBON 10K 5% 1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R178	1-249-429-l	CARBON	10K	5%	1/4W	
R179	1-249-425-1	CARBON	4.7K	5%	1/4W	
R180	1-249-421-1	CARBON	2.2K	5%	1/4W	
RI81	I-249-421-l	CARBON	2.2K	5%	I/4W	
R182	1-249-421-1	CARBON	2.2K	5%	1/4W	
R183	1-249-421-11	CARBON	2.2K	5%	1/4W	
R184	l-249-421-11	CARBON	2.2K	5%	1/4W	
R185	1-249-421-11	CARBON	2.2K	5%	1/4W	
R186	1-249-421-11	CARBON	2.2K	5%	1/4W	
R187	1-249-417-11	CARBON	1K	5%	1/4W	
R188	1-249-417-11	CARBON	1K	5%	1/4W	
R189	1-249-417-11	CARBON	1K	5%	1/4W	
RI90	I-249-417-11	CARBON	IK	5%	1/4W	
R191	1-249-421-11	CARBON	2.2K	5%	1/4W	
R192	1-249-421-11	CARBON	2.2K	5%	1/4W	
R193	1-249-429-11	CARBON	10K	5%	1/4W	
R194	1-249-429-11	CARBON	10K	5%	1/4W	
R195	1-249-437-11	CARBON	47K	5%	1/4W	
R197	l-247-903-00	CARBON	1M	5%	1/4W	
R198	1-249-425-11	CARBON	4.7K	5%	1/4W	
R251	l-249-409-11	CARBON	220	5%	1/4W	
R252	l-249-409-11	CARBON	220	5%	1/4W	
R253	l-249-409-11	CARBON	220	5%	1/4W	
R254	l-249-409-11	CARBON	220	5%	1/4W	
R255	l-249-420-11	CARBON	1.8K	5%	1/4W	
R256	l-249-405-11	CARBON	100	5%	1/4W	
R257	I-249-409-11	CARBON	220	5%	1/4W	
R258	I-249-409-11	CARBON	220	5%	1/4W	
R259	l-249-409-11	CARBON	220	5%	1/4W	
R260	l-249-409-11	CARBON	220	5%	1/4W	
R261	I-249-441-11	CARBON	100K	5%	1/4W	
R262	1-249-441-11	CARBON	10K	5%	1/4W	
R263	l-249-429-11	CARBON			1/4W	
R264	I-249-441-11	CARBON	100K	5%	1/4W	
R265	1-249-441-11	CARBON	100K	5%	1/4W	
R266	l-215-456-00	METAL	30K	1%	1/4W	
R267	1-249-429-11	CARBON	10K	5%	1/4W	
R268	l-215-865-11	HETAL OXIDE	220	5%	1W	F
R269	1-249-431-11	CARBON	15K	5%	1/4W	
R270	1-249-431-11	CARBON	15K	5%	1/4W	
R300	I-249-417-11	CARBON	1K	5%	1/4W	
R301	1-249-425-11	CARBON	4.7K	5%	1/4W	
R303	1-249-413-11	CARBON	2.2K	5%	1/4W	
R302	1-249-421-11	CARBON	470	5%	1/4W	
R304	1-259-883-11	CARBON	3.9M	5%	1/4W	
R305	l-249-423-11	CARBON	3.3K	5%	1/4W	
R306	1-249-429-11	CARBON	10K	5%	1/4W	
R307	l-249-423-11	CARBON	3.3K	5%	1/4W	
R308	1-249-433-11	CARBON	22K	5%	1/4W	
R309	l-249-421-11	CARBON	2.2K	5%	1/4W	
R310	1-249-417-11	CARBON	1K	5%	1/4W	
R311	l-215-448-00	METAL	13K	1%	1/4W	
R312	1-249-432-11	CARBON	18K	5%	1/4W	
R313	l-215-421-00	METAL	1K	1%	1/4W	
R314	1-247-899-11	CARBON	680K	5%	1/4W	
R315	1-249-405-l	CARBON	100	5%	1/4W	
R316	l-249-405-1 1	CARBON	100	5%	1/4W	
R317	l-249-405-1 1	CARBON	100	5%	1/4W	
R318	l-249-405-1 1	CARBON	100	5%	1/4W	
R319	1-249-405-l 1	CARBON	100	5%	1/4W	
R320	l-249-405-1 1	CARBON	100	5%	1/4W	
R321	l-249-405-1 1	CARBON	100	5%	1/4W	
R322	l-249-405-1 1	CARBON	100	5%	1/4W	
R323	1-249-441-1 1	CARBON	100K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R324	l-249-405-11	CARBON	100	5%	1/4W	
R325	1-249-441-11	CARBON	100K	5%	1/4W	
R326	I-249-405-11	CARBON	100	5%	I/4W	
R327	1-249-441-11	CARBON	100K	5%	1/4W	
R328	l-249-405-11	CARBON	100	5%	1/4W	
R329	1-249-433-11	CARBON	22K	5%	1/4W	
R330	1-249-433-11	CARBON	22K	5%	1/4W	
R331	1-249-433-11	CARBON	22K	5%	1/4W	
R332	1-249-436-11	CARBON	39K	5%	1/4W	
R333	1-249-433-11	CARBON	22K	5%	1/4W	
R334	1-249-433-11	CARBON	22K	5%	1/4W	
R335	I-249-418-11	CARBON	1.2K	5%	1/4W	
R336	l-247-903-00	CARBON	1M	5%	1/4W	
R337	l-249-405-11	CARBON	100	5%	1/4W	
R338	1-249-417-11	CARBON	1K	5%	1/4W	
Fi339	1-249-415-11	CARBON	680	5%	1/4W	
R341	l-215-457-00	METAL	33K	1%	1/4W	
R343	1-249-428-11	CARBON	8.2K	5%	1/4W	
R344	1-249-441-11	CARBON	100K	5%	1/4W	
R345	1-249-429-11	CARBON	10K	5%	1/4W	
R346	1-249-421-11	CARBON	2.2K	5%	1/4W	
R347	l-249-405-11	CARBON	100	5%	1/4W	
R348	1-249-411-11	CARBON	330	5%	1/4W	
R349	1-259-883-11	CARBON	3.9M	5%	1/4W	
R350	l-249-438-11	CARBON	56K	5%	1/4W	
R351	l-249-433-11	CARBON	22K	5%	1/4W	
R352	I-249-430-11	CARBON	12K	5%	1/4W	
R353	l-249-441-11	CARBON	100K	5%	1/4W	
R354	l-247-883-00	CARBON	150K	5%	1/4W	
R356	1-249-417-11	CARBON	1K	5%	1/4W	
R357	1-249-437-11	CARBON	47K	5%	1/4W	
R358	1-249-437-11	CARBON	47K	5%	1/4W	
R359	l-249-405-11	CARBON	100	5%	1/4W	
R360	1-249-413-11	CARBON	470	5%	1/4W	
R361	1-249-419-11	CARBON	1.5K	5%	1/4W	
R362	I-249-409-11	CARBON	220	5%	1/4W	
R363	l-249-409-11	CARBON	220	5%	1/4W	
R364	l-249-409-11	CARBON	220	5%	1/4W	
R365	1-249-417-11	CARBON	1K	5%	1/4W	
R366	1-249-417-11	CARBON	1K	5%	1/4W	
R367	l-247-891-00	CARBON	330K	5%	1/4W	
R368	l-249-417-11	CARBON	1K	5%	1/4W	
R370	l-249-405-11	CARBON	100	5%	1/4W	
R371	l-249-405-11	CARBON	100	5%	1/4W	
R372	1-249-433-11	CARBON	22K	5%	1/4W	
R373	1-249-437-11	CARBON	47K	5%	1/4W	
R374	l-249-429-11	CARBON	10K	5%	1/4W	
R375	1-249-418-11	CARBON	1.2K	5%	1/4W	
R376	l-249-417-11	CARBON	1K	5%	1/4W	
R377	1-249-416-11	CARBON	820	5%	1/4W	
R378	l-249-409-11	CARBON	220	5%	1/4W	
R379	l-249-425-11	CARBON	4.7K	5%	1/4W	
R380	I-249-420-11	CARBON	1.8K	5%	1/4W	
R381	1-249-417-11	CARBON	1K	5%	1/4W	
R382	1-249-417-11	CARBON	1K	5%	1/4W	
R383	1-249-421-11	CARBON	2 2K	5%	1/4W	
R384	l-249-410-11	CARBON	270	5%	1/4W	
R385	1-249-433-11	CARBON	22K	5%	1/4W	
R386	1-249-412-11	CARBON	390	5%	1/4W	
R387	1-249-415-11	CARBON	680	5%	1/4W	
R388	1-249-416-11	CARBON	820	5%	1/4W	
R389	1-249-427-1 1	CARBON	6.8K	5%	1/4W	
R390	1-249-437-1 1	CARBON	47K	5%	1/4W	

The components identified by shading and mark ⚠ are critical for safety
Replace only with part number specified

Les composants identifiés par une trame et par une marque ⚠ sont d'une importance critique pour la sécurité Ne les remplacer que par des pièces de numéro spécifié.

- The components identified by ❑ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation Should replacement be required, replace only with the value originally used

REF.NO	PART NO.	DESCRIPTION				REMARK
R391	1-249-429-11	CARBON	10K	5%	1/4W	
R392	1-249-425-11	CARBON	4.7K	5%	1/4W	
R393	1-249-437-11	CARBON	47K	5%	1/4W	
R394	1-249-437-11	CARBON	47K	5%	1/4W	
R395	1-249-409-11	CARBON	220	5%	1/4W	
R396	1-249-409-11	CARBON	220	5%	1/4W	
R500	1-249-433-11	CARBON	22K	5%	1/4W	
R502	1-215-893-11	METAL OXIDE	1.5K	53	2W	F
R503	1-215-893-11	METAL OXIDE	1.5K	5%	2W	F
R504	1-249-423-11	CARBON	3.3K	5%	1/4W	
R505	1-247-722-11	CARBON	5.6K	5%	1/4W	F
R506	1-216-345-11	METAL OXIDE	0.47	5%	1W	F
R507	1-249-401-11	CARBON	47	5%	1/4W	
R510	1-247-696-11	CARBON	47	5%	1/4W	F
R511	1-247-891-00	CARBON	330K	5%	1/4W	
R512	1-215-884-11	METAL OXIDE	47	5%	2W	F
R513	1-215-886-11	METAL OXIDE	100	5%	2W	F
R514	1-249-433-11	CARBON	22K	5%	1/4W	
R515	1-216-376-00	METAL OXIDE	3.9	5%	2W	F
R516	1-249-426-11	CARBON	5.6K	5%	1/4W	
R517	1-249-429-11	CARBON	10K	5%	1/4W	
R518	1-249-417-11	CARBON	1K	5%	1/4W	
R519	1-216-376-00	METAL OXIDE	3.9	5%	2W	F
R521	1-249-441-11	CARBON	100K	5%	1/4W	
R522	1-247-885-00	CARBON	180K	5%	1/4W	
R523	1-215-886-11	METAL OXIDE	100	5%	2W	F
R530	1-247-711-11	CARBON	680	5%	1/4W	F
R533	1-215-880-00	METAL OXIDE	10	5%	2W	F
R534	1-249-439-11	CARBON	68K	5%	1/4W	
R536	1-249-421-11	CARBON	2.2K	5%	1/4W	
R540	1-216-369-00	METAL OXIDE	1	5%	2W	F
R541	1-249-425-11	CARBON	4.7K	5%	1/4W	
R542	1-249-431-11	CARBON	15K	5%	1/4W	
R544	1-249-425-11	CARBON	4.7K	5%	1/4W	
R545	1-249-436-11	CARBON	39K	5%	1/4W	
R546	1-215-446-00	METAL	11K	1%	1/4W	
R547	1-249-405-11	CARBON	100	5%	1/4W	
R551	1-215-459-00	METAL	39K	1%	1/4W	
R552	1-249-385-11	CARBON	2.2	5%	1/4W	F
R553	1-249-437-11	CARBON	47K	5%	1/4W	
R554	1-216-371-00	METAL OXIDE	1.5	5%	2W	F
⧓R559 ⚠		CARBON			1/4W	
R563 ⚠	1-216-453-91	METAL OXIDE	270	5%	2W	F
R564	1-215-869-11	METAL OXIDE	1K	5%	1W	F
R565 ⚠	1-216-379-91	METAL OXIDE	6.8	5%	2W	F
R566	1-249-443-11	CARBON	0.47	5%	1/4W	F
R567	1-249-377-11	CARBON	0.47	5%	1/4W	F
R569 ⚠	1-216-445-91	METAL OXIDE	12	5%	2W	F
⧓R570 ⚠		CARBON			3/4W	
R572	1-249-437-11	CARBON	47K	5%	1/4W	
R573	1-247-889-00	CARBON	270K	5%	1/4W	
R574	1-249-409-11	CARBON	220	5%	1/4W	F
R583	1-249-429-11	CARBON	10K	5%	1/4W	
R585	1-249-422-11	CARBON	2.7K	5%	1/4W	
R591	1-249-455-11	CARBON	4 7	5%	1/4W	F
R592	1-247-895-00	CARBON	470K	5%	1/4W	
R593	1-249-441-11	CARBON	100K	5%	1/4W	
R594	1-249-429-11	CARBON	10K	5%	1/4W	
R601 ⚠	1-202-723-91	SOLID	2.2M	10%	1/2W	
R602	1-205-983-11	WIREWOUND	1.2	5%	15W	
R603	1-216-444-11	METAL OXIDE	82K	5%	1W	F
R604	1-216-425-11	METAL OXIDE	56	5%	1W	F
R605	1-249-417-11	CARBON	1K	5%	1/4W	
R619	1-215-896-00	METAL OXIDE	4.7K	5%	2W	F

REF.NO.	PART NO	DESCRIPTION				REMARK
R620	1-215-896-00	METAL OXIDE	4.7K	5%	2W	F
R621	1-249-417-11	CARBON	1K	5%	1/4W	
R623	1-249-421-11	CARBON	2 2K	5%	1/4W	
R624	1-216-375-00	METAL OXIDE	3.3	5%	2W	F
R625 ⚠	1-216-395-51	METAL OXIDE	3.3	5%	3W	F
R626	1-249-443-11	CARBON	0.47	5%	1/4W	F
R627	1-249-425-11	CARBON	4.7K	5%	1/4W	
R628	1-249-425-11	CARBON	4.7K	5%	1/4W	
R629	1-249-417-11	CARBON	1K	5%	1/4W	
R1017	1-249-431-11	CARBON	15K	5%	1/4W	
R1101	1-249-441-11	CARBON	100K	5%	1/4W	
R1102	1-249-429-11	CARBON	10K	5%	1/4W	
R1103	1-249-429-11	CARBON	10K	5%	1/4W	
R1104	1-249-429-11	CARBON	10K	5%	1/4W	
R1105	1-249-429-11	CARBON	10K	5%	1/4W	
R1106	1-249-440-11	CARBON	82K	5%	1/4W	
R1107	1-249-441-11	CARBON	100K	5%	1/4W	
R1108	1-249-435-11	CARBON	33K	5%	1/4W	
R1109	1-249-434-11	CARBON	27K	5%	1/4W	
R1110	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1111	1-249-429-11	CARBON	10K	5%	1/4W	
R1117	1-249-437-11	CARBON	47K	5%	1/4W	
R1118	1-249-437-11	CARBON	47K	5%	1/4W	
R1119	1-249-405-11	CARBON	100	5%	1/4W	

<RELAY>

RY601 ⚠	1-515-720-41	RELAY	

<SPARK GAP>

SG501	1-519-422-11	GAP, SPARK	

<TRANSFORMER>

T500 ⚠	1-439-416-41	TRANSFORMER ASSY, FLYBACK (NX-1604)	
T501 ⚠	1-437-195-13	TRANSFORMER, HORIZONTAL DRIVE	
T502 ⚠	1-421-794-11	TRANSFORMER, FERRITE (PWT)	
T601 ⚠	1-424-220-21	TRANSFORMER, LINE FILTER	
T602 ⚠	1-424-205-21	TRANSFORMER, LINE FILTER	
T604 ⚠	1-448-916-11	TRANSFORMER, POWER	

<TUNER>

TU101 ⚠	1-485-384-11	TUNER, BT (BTP-202)	

<CRYSTAL:

X101	1-577-082-11	VIBRATOR, CERAMIC	
X301	1-567-505-11	OSCILLATOR, CRYSTAL	

****

*1-637-953-11 M BOARD
****

*4-334-315-00	CAP, LED	
*4-334-322-00	HOLDER (A), LED	
*4-381-686-01	BRACKET (B), LIGHT GUIDE	
*4-389-517-01	GUIDE (R), LIGHT	

<CAPACITOR>

c52	1-124-477-11	ELECT	47HF	20%	16V	

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Replace only with part number specified

REF NO	PART NO.	DESCRIPTION				REMARK
		<DIODE>				
D1	a-719-311-89	DIODE SEL1222R-				
D2	g-719-311-89	DIODE SEL1222R-				
		<IC>				
IC51	8-741-148-33	IC SBX1483-59				
		<CONNECTOR>				
M11	*1-564-525-11	PLUG, CONNECTOR 10P				
M12	*1-564-522-11	PLUG, CONNECTOR 7P				
		<RESISTOR>				
R51	I-249-409-11	CARBON	220	5%	1/4W	
R52	I-249-393-11	CARBON	10	5%	1/4W	
		<SWITCH>				
S50 ⚠	1-572-198-11	SWITCH, KEYBOARD (POWER)				
S51	1-572-198-11	SWITCH, KEYBOARD				
S52	1-572-198-11	SWITCH, KEYBOARD				
S53	I-572-198-11	SWITCH, KEYBOARD				
S54	I-572-198-11	SWITCH, KEYBOARD				
S55	1-572-198-11	SWITCH, KEYBOARD				
**********						
	*A-1316-114-A	G BOARD, COMPLETE **********				
	*4-341-751-01	EYELET (EY607.EY608)				
	*4-341-752-01	EYELET (EY601~EY606)				
		<CAPACITOR>				
C615	1-124-563-11	ELECT	2200MF	20%	25V	
C617	1-102-114-00	CERAMIC	470PF	10%	50V	
C618	1-124-034-51	ELECT	33MF	20%	16V	
C619	I-124-034-51	ELECT	33HF	20%	16V	
C650	1-124-562-11	ELECT	47MF	20%	200V	
C652	I-102-244-00	CERAMIC	220PF	10%	500V	
C653	I-124-122-11	ELECT	100MF	20%	50V	
C654	1-124-478-11	ELECT	100MF	20%	25V	
C655	1-124-910-11	ELECT	47MF	20%	50V	
C656	1-136-601-11	FILM	0.01MF	10%	630V	
C657	I-162-114-00	CERAMIC	0.0047MF		2KV	
C658	1-106-383-00	MYLAR	0.047MF	10%	100V	
C659	I-162-599-12	CERAMIC	0.0047MF	20%	400V	
C660	1-124-925-11	ELECT	2.2MF	20%	100V	
C661	I-162-116-00	CERAMIC	680PF	10%	2KV	
C663	I-125-512-11	ELECT(BLOCK)	1000MF	20%	160V	
C670	1-124-360-00	ELECT	1000MF	20%	16V	
C671	1-124-120-11	ELECT	220MF	20%	25V	
C673	I-124-478-11	ELECT	100MF	20%	25V	
C677	I-124-563-11	ELECT	2200MF	20%	25V	
C678	I-102-125-00	CERAMIC	0.0047MF	10%	50V	
C679	1-101-821-00	CERAMIC	0.0022MF		500V	
		<DIODE>				

REF.NO.	PART NO.	DESCRIPTION	REMARK
D605	g-719-911-19	DIODE 1SS119	
D621	8-719-911-19	DIODE 1SS119	
D622	g-719-302-06	DIODE EU2A	
D623	g-719-311-31	DIODE RU-1P	
D624	8-719-301-64	DIODE RU4DS	
D625	g-719-948-59	DIODE ERB93-02	
D626	g-719-941-74	DIODE ERB91-02	
D627	8-719-948-59	DIODE ERB93-02	
		<FUSE>	
F602 ⚠	1-576-104-21	FUSE 2A/250V	
	1-533-223-11	CLIP, FUSE; F602	
		<FERRITE BEAD>	
FB601	1-410-396-41	FERRITE BEAD INDUCTOR	
FB602	1-410-397-21	FERRITE BEAD INDUCTOR	
FB603	1-410-397-21	FERRITE BEAD INDUCTOR	
FB604	I-410-396-41	FERRITE BEAD INDUCTOR	
FB607	1-410-397-21	FERRITE BEAD INDUCTOR	
FB608	1-410-397-21	FERRITE BEAD INDUCTOR	
FB609	1-410-397-21	FERRITE BEAD INDUCTOR	
FB610	1-410-397-21	FERRITE BEAD INDUCTOR	
		<CONNECTOR>	
G1	*1-508-765-00	PIN. CONNECTOR (5MM PITCH) 3P	
G24	*1-564-508-11	PLUG, CONNECTOR 5P	
G61	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
G63	*1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P	
G64	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
		<IC>	
IC651 ⚠	8-749-920-57	IC STR-S6301	
IC652	8-719-155-73	PHOTO COUPLER PS2501-1L8	
IC653 ⚠	8-749-920-62	IC SE-135MS	
		<COIL>	
L613	I-459-155-00	COIL (WITH CORE) 45UH	
L614	I-459-155-00	COIL (WITH CORE) 45UH	
		<TRANSISTOR>	
8603	g-729-200-17	TRANSISTOR 2SA1091-O	
Q604	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q611	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q612	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		<RESISTOR>	
R606	I-207-645-00	WIREWOUND 0.47 5% 3W F	
R610	1-215-417-00	METAL 680 1% 1/4W	
R611	1-215-477-00	METAL 220K 1% 1/4W	
R612	1-249-441-11	CARBON 100K 5% 1/4W	
R613	I-249-429-11	CARBON 10K 5% 1/4W	
R614	1-249-429-11	CARBON 10K 5% 1/4W	
R615	1-247-895-00	CARBON 470K 5% 1/4W	
R616	1-249-425-11	CARBON 4.7K 5% 1/4W	
R617	1-249-425-11	CARBON 4.7K 5% 1/4W	
R650	1-215-893-11	METAL OXIDE 1.5K 5% 2W F	
R651	I-216-458-11	METAL OXIDE 1.8K 5% 2W F	

G C

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R652	I-216-473-11	METAL OXIDE	56	5%	3W	F
R653	I-216-473-11	METAL OXIDE	56	5%	3W	F
R654	l-207-612-00	WIREWOUND	0.1	10%	2w	F
R655	I-207-616-00	WIREWOUND	0.47	10%	2W	F
R656	l-249-414-11	CARBON	560	5%	1/4W	F
R657	l-202-843-11	SOLID	270K	10%	1/2W	
R658	l-215-903-11	METAL OXIDE	68K	5%	2W	F
R659	l-215-903-11	METAL OXIDE	68K	5%	2W	F
R660	l-215-903-11	METAL OXIDE	68K	5%	2W	F
R661	l-215-903-11	METAL OXIDE	68K	5%	2W	F
R663	l-215-881-11	METAL OXIDE	15	5%	2W	F
R664	l-216-446-00	METAL OXIDE	18	5%	2W	F
R665	I-202-730-00	SOLID	8.2M	10%	1/2W	
R666	l-249-413-11	CARBON	470	5%	1/4W	F
R667	l-216-444-11	METAL OXIDE	82K	5%	1W	
	I-249-429-11	CARBON	10K	5%	1/4W	
R669	l-216-341-11	METAL OXIDE	0.22	5%	1W	F
R670	l-249-423-11	CARBON	3.3K	5%	1/4W	
R671	I-216-341-11	METAL OXIDE	0.22	5%	1W	F
R672	l-216-457-00	METAL OXIDE	1.2K	5%	2W	F
R673	I-249-389-11	CARBON	4.7	5%	1/4W	F
R674	I-249-439-11	CARBON	68K	5%	1/4W	F
R675	L-249-406-11	CARBON	120	5%	1/4W	F
R676	l-249-415-11	CARBON	680	5%	1/4W	
R677	l-249-417-11	CARBON	1K	5%	1/4W	
R678	1-249-414-11	CARBON	560	5%	1/4W	
R679	I-216-473-11	METAL OXIDE	56	5%	3W	F

<TRANSFORMER>

T651 ⚠ 1-449-353-11 SET (CONVERTER TRANSFORMER)

<THERMISTOR>

THP601⚠ 1-804-081-23 THERMISTOR, POSITIVE

****

*A-1331-055-A C BOARD, COMPLETE
****

*4-341-751-01 EYELET (EY705,EY709,EY710)
*4-341-752-01 EYELET (EY704,EY706,EY707)
*4-379-160-01 COVER (REAR LID), CV
*4-379-167-01 COVER (MAIN), CV

<CONNECTOR>

C1	l-506-348-99	PIN, CONNECTOR	3P		
C33	*l-564-510-11	PLUG, CONNECTOR	7P		
c53	*1-508-768-00	PIN, CONNECTOR (5MM PITCH)	6P		

<CAPACITOR>

C701	l-162-116-00	CERAMIC	680PF	10%	2KV
C702	1-136-601-11	FILM	0.01MF	10%	630V
C703	l-124-907-11	ELECT	10MF	20%	50V
C704	l-123-946-00	ELECT	4.7MF	20%	250V
C705	l-101-821-00	CERAMIC	0.0022MF		500V
C707	l-102-116-00	CERAMIC	680PF	10%	50V
C708	l-102-116-00	CERAMIC	680PF	10%	50V
C709	1-102-116-00	CERAMIC	680PF	10%	50V
C710	l-102-117-00	CERAMIC	820PF	10%	50V
C711	1-126-233-11	ELECT	22MF	20%	25V
C712	1-102-116-00	CERAMIC	680PF	10%	50V
C713	l-102-117-00	CERAMIC	820PF	10%	50V
C714	1-162-622-11	CERAMIC	330PF	10%	6.3KV
C715	I-102-074-00	CERAMIC	0.001MF	10%	50V
C718	I-102-074-00	CERAMIC	0.001MF	10%	50V
C720	I-126-233-11	ELECT	22MF	20%	25V
C721	l-102-074-00	CERAMIC	0.001MF	10%	50V
C730	1-102-116-00	CERAMIC	680PF	10%	50V
C731	1-102-116-00	CERAMIC	680PF	10%	50V
C732	1-102-116-00	CERAMIC	680PF	10%	50V

<DIODE>

D701	8-719-911-19	DIODE	1SS119
D702	8-719-911-19	DIODE	1SS119
D703	8-719-911-19	DIODE	1SS119
D704	8-719-911-19	DIODE	1SS119
D705	8-719-911-19	DIODE	1SS119
D706	8-719-911-19	DIODE	1SS119
D707	g-719-911-19	DIODE	1SS119
D708	8-719-911-19	DIODE	1SS119
D709	8-719-911-19	DIODE	1SS119
D710	g-719-901-83	DIODE	1SS83
D711	8-719-901-83	DIODE	1SS83
D712	8-719-901-83	DIODE	1SS83
D713	8-719-901-83	DIODE	1SS83

<JACK>

J701 ⚠ 1-543-071-13 SOCKET, PICTURE TUBE

<COIL>

L701	l-408-417-00	INDUCTOR	47UH
L702	l-408-421-00	INDUCTOR	100UH
L703	l-408-420-00	INDUCTOR	82UH
L704	1-408-410-00	INDUCTOR	12UH
L705	l-408-411-00	INDUCTOR	15UH
L706	l-408-421-00	INDUCTOR	100UH
L707	l-408-411-00	INDUCTOR	15UH

<NEON LAMP>

NL701 l-519-154-91 LAMP, NEON

<TRANSISTOR>

Q701	8-729-326-11	TRANSISTOR	2SC2611
Q702	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q703	8-729-200-17	TRANSISTOR	2SA1091-O
Q704	8-729-326-11	TRANSISTOR	2SC2611
Q705	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q706	8-729-200-17	TRANSISTOR	2SA1091-O
Q707	8-729-200-17	TRANSISTOR	2SA1091-O
8708	8-729-326-11	TRANSISTOR	2SC2611
Q709	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q710	8-729-255-12	TRANSISTOR	2SC2551-O
Q711	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q712	8-729-255-12	TRANSISTOR	2SC2551-O
Q713	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q714	8-729-200-17	TRANSISTOR	2SA1091-O
Q715	8-729-200-17	TRANSISTOR	2SA1091-O
Q716	8-729-200-17	TRANSISTOR	2SA1091-O

Les composants identifiés par une trame et par une marque ⚠ sont d'une importance critique pour la sécurité Ne les remplacer que par des pièces de numéro spécifié.

The components identified by shading and mark ⚠ are critical for safety
Replace only with part number specified

REF NO	PART NO	DESCRIPTION				REMARK
		<RESISTOR>				
R701	l-216-391-11	METAL OXIDE	1.5	5%	3W	F
R702	l-202-719-00	SOLID	1M	10%	1/2W	
R703	l-202-842-11	SOLID	220K	10%	1/2W	
R704	l-202-846-00	SOLID	470K	10%	1/2W	
R705	l-202-549-00	SOLID	100	10%	1/2W	
R706	I-202-838-00	SOLID	100K	10%	1/2W	
R707	l-202-842-11	SOLID	220K	10%	1/2W	
R708	I-202-818-00	SOLID	1K	10%	1/2W	
R709	l-202-818-00	SOLID	1K	10%	1/2W	
R710	l-202-818-00	SOLID	1K	10%	1/2W	
R711	l-202-837-00	SOLID	82K	10%	1/2W	
R712	I-202-842-11	SOLID	220K	10%	1/2W	
R713 ⚠	I-216-486-51	METAL OXIDE	8.2K	5%	3W	F
i-77;	I-249-409-11	CARBON	220	5%	1/4W	
	l-202-818-00	SOLID	1K	10%	1/2W	
R715 ⚠	I-216-486-51	METAL OXIDE	8.2K	5%	3W	F
R717	I-249-409-11	CARBON	220	5%	1/4W	
R718	I-249-409-11	CARBON	220	5%	1/4W	
R720 ⚠	I-216-486-51	METAL OXIDE	8.2K	5%	3W	F
R721	I-202-842-11	SOLID	220K	10%	1/2W	
R723	l-249-405-11	CARBON	100	5%	1/4W	
R724	l-249-405-11	CARBON	100	5%	1/4W	
R725	l-249-429-11	CARBON	10K	5%	1/4W	
R726	I-249-407-11	CARBON	150	5%	1/4W	
R727	I-249-429-11	CARBON	10K	5%	1/4W	
R728	I-249-407-11	CARBON	150	5%	1/4W	
R729	l-249-405-11	CARBON	100	5%	1/4W	
R730	I-249-407-11	CARBON	150	5%	1/4W	
R731	l-247-704-11	CARBON	220	5%	1/4W	F
R732	l-247-704-11	CARBON	220	5%	1/4W	F
R733	l-247-704-11	CARBON	220	5%	1/4W	F
R739	1-249-433-11	CARBON	22K	5%	1/4W	
R740	l-215-902-11	METAL OXIDE	47K	5%	2W	F
R741	1-249-417-11	CARBON	1K	5%	1/4W	
R742	1-249-429-11	CARBON	10K	5%	1/4W	F
R743	1-249-429-11	CARBON	10K	5%	1/4W	F
R744	l-247-725-11	CARBON	10K	5%	1/4W	F
R745	I-247-713-11	CARBON	1K	5%	1/4W	F
R746	l-215-902-11	METAL OXIDE	47K	5%	1W	F
R747	l-247-725-11	CARBON	10K	5%	1/4W	F
R749	l-249-437-11	CARBON	47K	5%	1/4W	
R750	I-249-409-11	CARBON	220	5%	1/4W	
R751	1-249-397-11	CARBON	22	5%	1/4W	
R752	I-249-397-11	CARBON	22	5%	1/4W	
R753	l-249-397-11	CARBON	22	5%	1/4W	
R757	1-249-416-11	CARBON	820	5%	1/4W	
R777	l-249-441-11	CARBON	100K	5%	1/4W	
		<VARIABLE RESISTOR,				
RV701	!-230-641-11	RES. ADJ. METAL GLAZE 2.2M				
RV702 ⚠	I-230-519-11	RES. ADJ. METAL GLAZE 100K				

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*1-637-952-22 E BOARD
****

REF NO	PART NO	DESCRIPTION				REMARK
		<CONNECTOR>				
E21	*1-564-514-11	PLUG, CONNECTOR 11P				
E25	*1-565-509-11	CONNECTOR, BOARD TO BOARD 18P				

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*l-633-487-41 U2 BOARD
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*4-341-752-01 EYELET (EY901~EY904)

REF NO.	PART NO	DESCRIPTION			
		<CAPACITOR>			
C900	1-101-004-00	CERAMIC	0.01MF		50V
C901	l-126-233-11	ELECT	22HF	20%	25V
C902	l-124-907-11	ELECT	10MF	20%	50V
C903	l-124-907-11	ELECT	10MF	20%	50V
C904	l-124-907-11	ELECT	10MF	20%	50V
C905	1-124-907-11	ELECT	10MF	20%	50V
C906	l-124-907-11	ELECT	10MF	20%	50V
C907	l-124-907-11	ELECT	10MF	20%	50V
C908	l-126-233-11	ELECT	22MF	20%	25V
C909	l-126-233-11	ELECT	22MF	20%	25V
C910	I-126-233-11	ELECT	22MF	20%	25V
		<DIODE>			
D900	a-719-110-13	DIODE RDY.	ES-B2		
D901	8-719-110-13	DIODE RD9.	ES-B2		
D902	8-719-110-13	DIODE RDY.	ES-B2		
D903	8-719 110-13	DIODE RD9.	ES-B2		
D904	8-719-110-13	DIODE RD9.	ES-B2		
D905	8-719-110-13	DIODE RD9.1ES-B2			
D906	B-719-110-13	DIODE RD9.1ES-B2			
DY07	8-719-110-13	DIODE RD9.1ES-B2			
D908	8-719-110-13	DIODE RD9.1ES-B2			
D909	8-719-110-13	DIODE RD9.1ES-B2			
D910	8-719-110-13	DIODE RD9.1ES-B2			
DY12	8-719-110-13	DIODE RD9.1ES-B2			
		<JACK>			
J1901	I-565-931-11	TERMINAL BLOCK, S 3P			
51902	l-565-840-41	PIN JACK BLOCK 5P			
51904	1-565-838-11	JACK BLOCK, PIN 2P			
51905	1-537-187-21	TERMINAL, PUSH (4P)			
		<NEON LAMP>			
NL901	l-519-108-99	LAMP, NEON			
NL903	l-519-108-99	LAMP, NEON			
		<TRANSISTOR>			
Q900	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q901	8-729-119-78	TRANSISTOR 2SC2785-HFE			
		<RESISTOR>			
R900	l-247-804-11	CARBON	75	5%	1/4W
R901	I-247-804-11	CARBON	75	5%	1/4W
R902	l-249-405-11	CARBON	100	5%	1/4W
R905	l-247-804-11	CARBON	75	5%	1/4W
R906	l-247-895-00	CARBON	470K	5%	1/4W
R907	l-247-895-00	CARBON	470K	5%	1/4W
R908	I-249-405-11	CARBON	100	53	1/4W
R911	r-247-804-11	CARBON	75	5%	1/4W
R912	l-247-895-00	CARBON	470K	5%	1/4W
R913	l-247-895-00	CARBON	470K	5%	1/4W

REF.NO.	PART NO.	DESCRIPTION				REMARK
R914	I-249-417-11	CARBON	1K	5%	1/4W	
R915	1-249-417-11	CARBON	1K	5%	1/4W	
R916	l-247-895-00	CARBON	470K	5%	1/4W	
R917	l-247-895-00	CARBON	470K	5%	1/4W	
R918	1-249-405-11	CARBON	100	5%	1/4W	
R919	l-249-405-11	CARBON	100	5%	1/4W	
		<SWITCH>				
SW900	I-572-198-11	SWITCH, KEYBOARD				
		<CONNECTOR>				
U2-1	*l-565-491-11	CONNECTOR, BOARD TO BOARD	15P			
U2-2	*1-565-491-11	CONNECTOR, BOARD TO BOARD	15P			
		**********				
	*A-1394-314-A	U1 BOARD, COMPLETE				
		**********				
	*4-341-752-01	EYELET (EY401~EY403)				
		<CAPACITOR>				
C400	I-126-233-11	ELECT	22MF	20%	25V	
C401	I-124-477-11	ELECT	47MF	20%	16V	
C402	1-101-004-00	CERAMIC	0.01MF		50V	
C403	1-101-004-00	CERAMIC	0.01MF		50V	
C404	l-102-973-00	CERAMIC	100PF	5%	50V	
C405	1-124-477-l	ELECT	47HF	20%	16V	
C406	1-126-233-1	ELECT	22MF	20%	25V	
C407	1	ELECT	22MF	20%	25V	
C408	1-126-233-1 l-124-478-1	1 ELECT	100MF	20%	25V	
C409	l-126-233-1	1 ELECT	22MF	20%	25V	
C412	1-124-477-1	1 ELECT	47MF	20%	16V	
C413	1-124-478-1	1 ELECT	100MF	20%	25V	
C414	1-126-233-1	1 ELECT	22MF	20%	25V	
C415	1-126-233-1	1 ELECT	22MF	20%	25V	
C416	l-126-233-1	1 ELECT	22MF	20%	25V	
C417	1-126-233-11	ELECT	22MF	20%	25V	
C418	1-124-478-11	ELECT	100MF	20%	25V	
C419	l-101-004-00	CERAMIC	0.01MF		50V	
C420	l-126-233-11	ELECT	22MF	20%	25V	
C421	1-124-478-11	ELECT	100MF	20%	25V	
C422	1-101-004-00	CERAMIC	0.01MF		50V	
C426	l-126-233-11	ELECT	22MF	20%	25V	
C460	I-126-320-11	ELECT	10MF	20%	16V	
C461	l-126-233-11	ELECT	22MF	20%	25V	
C462	l-124-120-11	ELECT	220MF	20%	25V	
C463	l-126-320-11	ELECT	10MF	20%	16V	
C464	l-124-563-11	ELECT	2200MF	20%	25V	
C465	l-106-220-00	MYLAR	0.1MF	10%	100V	
C466	l-124-563-11	ELECT	2200MF	20%	25V	
C467	l-106-220-00	MYLAR	0.1MF	10%	100V	
C468	l-136-173-00	FILM	0.47MF	5%	50V	
C469	l-124-563-11	ELECT	2200MF	20%	25V	
C471	1-126-233-11	ELECT	22MF	20%	25V	
1472	l-124-120-11	ELECT	220MF	20%	25V	
C475	l-124-925-11	ELECT	2.2MF	20%	50V	
		<COM FILTER BLOCK>				
CM1301	1-466-162-31	BLOCK, COM FILTER (CFB-4)				

REF.NO.	PART NO.	DESCRIPTION		REMARK
		<DIODE>		
D407	8-719-110-17	DIODE	RD10ES-B2	
D408	g-719-109-89	DIODE	RD5.6ES-B2	
D409	8-719-109-89	DIODE	RD5.6ES-B2	
D420	8-719-911-19	DIODE	lSS119	
D421	8-719-911-19	DIODE	1SS119	
		<IC>		
IC402	g-759-710-68	IC	NJM2245S	
IC403	g-759-710-68	IC	NJM2245S	
IC405	g-759-980-43	IC	TDA2009A	
IC444	g-752-053-17	IC	CXA1114P	
		<COIL>		
L400	l-410-473-11	INDUCTOR	18UH	
		(TRANSISTOR,		
1400	8-729-119-78	TRANSISTOR	2SC2785-HFE	
1402	8-729-119-78	TRANSISTOR	2SC2785-HFE	
1403	g-729-119-78	TRANSISTOR	2SC2785-HFE	
I404	8-729-119-78	TRANSISTOR	2SC2785-HFE	
1405	g-729-119-78	TRANSISTOR	2SC2785-HFE	
1406	g-729-119-78	TRANSISTOR	2SC2785-HFE	
1407	8-729-119-78	TRANSISTOR	2SC2785-HFE	
1408	g-729-119-78	TRANSISTOR	2SC2785-HFE	
1409	8-729-119-76	TRANSISTOR	2SA1175-HFE	
1410	8-729-119-78	TRANSISTOR	2SC2785-HFE	
1413	g-729-119-78	TRANSISTOR	2SC2785-HFE	
1414	8-729-119-78	TRANSISTOR	2SC2785-HFE	
1415	g-729-119-78	TRANSISTOR	2SC2785-HFE	
1416	g-729-119-78	TRANSISTOR	2SC2785-HFE	
1417	g-729-119-78	TRANSISTOR	2SC2785-HFE	
1430	g-729-119-78	TRANSISTOR	2SC2785-HFE	
1431	g-729-119-78	TRANSISTOR	2SC2785-HFE	
1432	g-729-119-78	TRANSISTOR	2SC2785-HFE	
1433	8-729-119-76	TRANSISTOR	2SA1175-HFE	
		<RESISTOR>		
R400	l-249-421-11	CARBON	2.2K 5% 1/4W	
R401	l-249-405-11	CARBON	100 5% 1/4W	
R402	I-249-429-11	CARBON	10K 5% 1/4W	
R403	l-249-417-11	CARBON	IK 5% 1/4W	
R404	l-249-405-11	CARBON	100 5% 1/4W	
R405	l-249-429-11	CARBON	10K 5% 1/4W	
R406	1-249-417-11	CARBON	1K 5% 1/4W	
R407	l-249-417-11	CARBON	1K 5% 1/4W	
R408	l-249-429-11	CARBON	10K 5%	
R409	l-249-405-11	CARBON	100 5% ii::	
R410	I-249-417-11	CARBON	1K 5%	
R411	1-249-429-11	CARBON	10K 5% ii::	
R412	l-249-405-11	CARBON	100 5% 1/4W	
R413	l-249-417-11	CARBON	1K 5% 1/4W	
R414	l-249-431-11	CARBON	15K 5% 1/4W	
R415	1-249-429-11	CARBON	10K 5% 1/4W	
R416	l-249-417-11	CARBON	1K 5% 1/4W	
R417	1-249-417-11	CARBON	1K 5% 1/4W	
R418	1-249-425-11	CARBON	4.7K 5% 1/4W	
R419	l-249-417-11	CARBON	1K 5% 1/4W	

U1

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R420	I-249-417-11	CARBON	1K	5%	1/4W	
R421	1-249-431-11	CARBON	15K	5%	1/4W	
R422	1-249-417-11	CARBON	1K	5%	1/4W	
R423	1-249-429-11	CARBON	10K	5%	1/4W	
R424	I-249-425-11	CARBON	4.7K	5%	1/4W	
R425	1-249-417-11	CARBON	1K	5%	1/4W	
R426	l-249-405-11	CARBON	100	5%	1/4W	
R427	I-249-405-11	CARBON	100	5%	1/4W	
R428	1-249-417-11	CARBON	1K	5%	1/4W	
R429	l-249-405-11	CARBON	100	5%	1/4W	
R432	1-249-435-11	CARBON	33K	5%	1/4W	
R433	1-249-435-11	CARBON	33K	5%	1/4W	
R434	1-249-413-11	CARBON	470	5%	1/4W	
R435	1-249-413-11	CARBON	470	5%	1/4W	
R436	I-249-405-11	CARBON	100	5%	1/4W	
R437	I-249-405-11	CARBON	100	5%	1/4W	
R438	1-249-417-11	CARBON	1K	5%	1/4W	
R439	I-249-405-11	CARBON	100	5%	1/4W	
A441	l-249-405-11	CARBON	100	5%	1/4W	
R444	1-249-414-11	CARBON	560	5%	1/4W	
R445	1-249-414-11	CARBON	560	5%	1/4W	
R446	1-249-414-11	CARBON	560	5%	1/4W	
R447	1-249-414-11	CARBON	560	5%	1/4W	
R450	1-249-417-11	CARBON	1K	5%	1/4W	
R451	l-249-405-11	CARBON	100	5%	1/4W	
R452	l-249-405-11	CARBON	100	5%	1/4W	
R453	1-249-417-11	CARBON	1K	5%	1/4W	
R454	1-249-417-11	CARBON	1K	5%	1/4W	
R455	I-249-417-11	CARBON	1K	5%	1/4W	
R456	l-249-405-11	CARBON	100	5%	1/4W	
R457	1-249-417-11	CARBON	1K	5%	1/4W	
R458	l-249-405-11	CARBON	100	5%	1/4W	
R459	I-249-417-11	CARBON	1K	5%	1/4W	
R463	l-249-405-11	CARBON	100	5%	1/4W	
R466	l-249-405-11	CARBON	100	5%	1/4W	
R467	l-249-430-11	CARBON	12K	5%	1/4W	
R468	l-249-430-11	CARBON	12K	5%	1/4W	
R470	1-249-441-11	CARBON	100K	5%	1/4W	
R471	l-247-883-00	CARBON	150K	5%	1/4W	
R475	I-249-413-11	CARBON	470	5%	1/4W	
R476	1-249-441-11	CARBON	100K	5%	1/4W	
R477	1-249-435-11	CARBON	33K	5%	1/4W	
R478	l-249-405-11	CARBON	100	5%	1/4W	
R479	l-249-405-11	CARBON	100	5%	1/4W	
R480	1-249-418-11	CARBON	1.2K	5%	1/4W	
R481	1-249-398-11	CARBON	27	5%	1/4W	
R482	1-249-421-11	CARBON	2.2K	5%	1/4W	
R483	1-249-381-11	CARBON	1	5%	1/4W	
R484	1-249-418-11	CARBON	1.2K	5%	1/4W	
R485	l-249-398-11	CARBON	27	5%	1/4W	
R486	1-249-421-11	CARBON	2.2K	5%	1/4W	
R487	1-249-381-11	CARBON	1	5%	1/4W	
R488	1-249-425-11	CARBON	4.7K	5%	1/4W	
R489	1-249-428-11	CARBON	8.2K	5%	1/4W	
R492	1-249-425-11	CARBON	4.7K	5%	1/4W	
R493	l-249-428-11	CARBON	8.2K	5%	1/4W	
R494	l-249-405-11	CARBON	100	5%	1/4W	
R495	l-249-421-11	CARBON	2.2K	5%	1/4W	
R496	1-249-421-11	CARBON	2.2K	5%	1/4W	
R497	l-249-405-11	CARBON	100	5%	1/4W	
R498	l-249-437-11	CARBON	47K	5%	1/4W	
R499	l-249-437-11	CARBON	47K	5%	1/4W	
R1400	l-249-435-11	CARBON	33K	5%	1/4W	
R1401	1-249-435-11	CARBON	33K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1402	l-249-435-11	CARBON	33K	5%	1/4W	
R1403	1-249-435-11	CARBON	33K	5%	1/4W	
R1406	l-249-405--11	CARBON	100	5%	1/4W	
R1407	l-249-405-11	CARBON	100	5%	1/4W	

<CONNECTOR>

U1-1	*l-565-506-11	CONNECTOR, BOARD TO BOARD 15P
U1-2	*l-565-506-11	CONNECTOR, BOARD TO BOARD 15P
U1-4	*1-564-505-11	PLUG, CONNECTOR 2P
U1-5	*l-560-124-00	PLUG, CONNECTOR (2.5MM PITCH)
U1-22	*1-565-494-11	CONNECTOR, BOARD TO BOARD 18P
U1-23	x1-565-494-11	CONNECTOR, BOARD TO BOARD 18P

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MISCELLANEOUS
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⚠	1-426-350-11	COIL, DEMAGNETIZATION				
⚠	1-451-275-31	DEFLECTION YOKE (*28PFA)				
	1-452-032-00	MAGNET, DISK; 10MM ϕ				
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ				
	*1-556-945-21	CABLE, P-P				
	1-561-306-00	JACK, PIN (P)				
⚠	1-590-492-11	CORD, POWER (WITH CONNECTOR)				
	8-741-681-02	IC SBX1681-02				
C920	1-124-768-11	CAP, ELECT 4.7MF	20%		50V	
C921	1-124-768-11	CAP, ELECT 4.7MF	20%		50V	
SPY01	l-544-520-11	SPEAKER				
SP902	l-544-519-11	SPEAKER				
SP903	l-544-520-11	SPEAKER				
SP904	1-544-519-11	SPEAKER				
V901	⚠ 8-757-753-05	PICTURE TUBE (A68JMT50X)				

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ACCESSORIES AND PACKING MATERIALS
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PART NO.	DESCRIPTION	REMARK
3-754-970-21	MANUAL, INSTHUCTION	
3-754-970-31	MANUAL, INSTRUCTION (CND ONLY)	
3-754-970-41	MANUAL, INSTRUCTION (USA ONLY)	
*4-031-388-01	CUSHION (UPPER) (ASSY)	
*4-031-389-01	CUSHION (LOWER) (ASSY)	
*4-031-390-01	INDIVIDUAL CARTON	
*4-381-155-01	BAG, PROTECTION	

REMOTE COMMANDER

l-693-119-11	REMOTE COMMANDER (RM-Y111)	
9-900-028-01	COVER, BATTERY (FOR RM-Y111)	

9-964-820-01

Sony Corporation
TV Group

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